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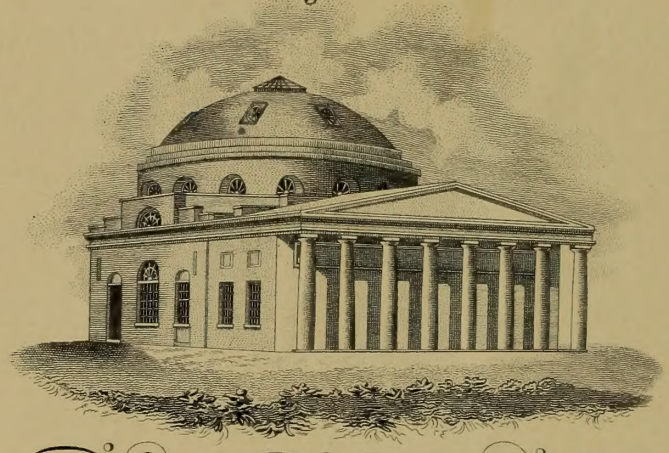

University of Maryland

University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscript dissertations, known as Inaugural Dissertations or Medical Essays, were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1812-1887. The early bound dissertations were bound together during the 1960's. The original tables of contents for the bound volumes contained numerous errors in subsequent editions, 1960's and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

The project team who investigated and corrected the tables of contents were: Richard J. Dobles, Historical Library Preservation Officer; Mark Millington Parker, Metadata Management Librarian; Angela Carlisle and Carol Harding Henry, Resources Division; Sarah Hynds, Cataloger; and Maggie Wolff, Services Division.

These dissertations were digitized in 2011-2012 and are available at the UM Digital Archive (archive.lib.umaryland.edu) and the Internet Archive (www.archive.org).

University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

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UNIVERSITY OF MARYLAND

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1855 (c)

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Brock, Jesse Wyandott	Typhoid Fever	(partially faded ink)
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HSHSL 2012 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1821-1851; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

Author	Title	Notes
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Author Unknown	Malaria [1]	

[1] No title page. Partial thesis.

HSHSL 2012 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1821-1851; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

UNIVERSITY OF MARYLAND

THESES

1855 (c)

Lowndes, Charles	The Circulation of the Blood	23p.
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Westmoreland, William ~~W.~~ G.	On the Morbid Effects of Diseased Teeth and Gums on the General System	14p.
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Snowden, Arthur M.	Lobar Pneumonia	16p.
Vaughan, Henry	Dysentery	24p.
Jacobs, James T.	Erysipelas	20p.
Slaughter, James Madison	Dysentery	21p.
Lomax, Richard Stuart	Intermittent Fever	21p.

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? Medical and Toxicological effects of Strychnine upon the human system 14

18909

Kennedy, Dandridge	Necrosis	28p.
~~Anonymous~~ Author Unknown	Malaria	12p.

An
Inaugural Dissertation
on
The Circulation of
the Blood
Submitted to the examination
of the Provost Regents
and Faculty of Physic

of the University of
Maryland
for the degree of Doctor
of Medicine.
By

Charles Lowndes

Circulation

By this term we mean that function by which the nutritive fluid is conveyed to every part of the body. This distribution is effected by means the general title of the Circulation of the blood. The Organs and canals, and the means through which it is accomplished constitutes what is called the vascular system. To William Harvey is given the credit of discovering the laws relating to Circulation. In plants as well as in animals, we find there is a circulation, but in the former, there is no central organ — the elaborated

sap is distributed partly by capillary action also the influence of the light and air upon the leaves but mainly by the affinity between the elaborated sap and the tissues of the plant. The course of the circulation of the healthy adult is as follows, The venous blood is collected in the right auricle, thence through the tricuspid valve in the right ventricle thence it is distributed by means of the pulmonary ~~valves~~ artery to be aerated after which it is collected by the pulmonary veins to be conveyed to the left auricle then through

the blood since it will continue, when the heart is empty, nor by the stimulus of the air, for it will continue when the heart is ~~empty~~ in vacuo. and it has been shown that it does not depend on the nervous system, it must be on some power, which as yet we are unacquainted with. The two auricles contract together, and this contraction is called the systole of the heart, their dilatation the diastole, The ventricles contract, when the auricles dilate, The auricles are little concerned in the expulsion of the blood to the different parts of

the body, this is assigned to the ventricles of the heart, the auricles act as receptacles for the blood, the systole of the ventricles correspond with the projection of the blood into the arteries causing the pulse, which was generally felt at the wrist, whilst the diastole coincides with the ~~diastole~~ collapse of these vessels, the tricuspid valve on the right and bicuspid on the left, prevent the blood returning in the auricles on contraction of the ventricles, but sometimes the closure of one or both of these valves is not complete and a certain

When the ventricles relax the blood is prevented from ~~returning~~ returning thru their cavities, by the semilunar valves at the mouth of the aorta and pulmonary artery. The diastole of the heart is supposed to be owing to the presence of the second fibrous tissue, intermixed with the muscular substance, upon whose elasticity the first stage is supposed to depend, the second caused by the influx of blood, produced by auricular systole, the impulse of the heart must not be confounded with the arterial pulse. The hearts impulse is the

should communicate to its apex to the walls of the thorax, in the neighborhood of the fifth and sixth ribs, When the ear is placed over the region of the heart, we hear two sounds, The sounds are of different lengths, first being the longest, If the whole interval from the beginning of one pulsation to the beginning of the next, be divided into four spaces of time, The first two will be occupied by the first sound, the third by the second, while the fourth will represent the period of repose,
The causes of these sounds are complex

The principal one is found at the orifices of the aorta and pulmonary artery, and is produced by the push of blood, on the rough internal surface of the heart, the inlets of the blood being narrow also the sound of muscular contraction, accompanying the systole of the ventricles The impulse of the heart against the walls of the chest is another cause, for when the impulse is prevented the sound is much diminished, The second the diastole of the ventricles, there is not so much doubt, it is produced by the sudden shutting down of the

of the semilunar valves at the orifices of the aorta and pulmonary artery which valves prevent the reflux of the blood in the ventricles during their dilitation, The right auricle and ventricle is larger than the left, but the walls of the latter are thicker the left ventricle has its walls nearly three times as thick, since it has to exercise more force in sending the blood through every part of the system Each cavity will hold about two ounces, but it is probable that the ventricles do not entirely empty themselves at each

stroke, they therefore discharge about one and a half ounces at each pulsation, about seven pounds of blood will pass through the heart in a minute, The whole quantity of the blood in the human body is equal to one fifth of its weight, All the blood passes through the body once in five minutes and would circulate fifty or twenty times in an hour, It has been said that substances introduced into the venous circulation have been detected in less than thirty seconds,
The force which the heart propells its blood has been variously stated, Hales

says the force of a mans
blood, will sustain of a
column of blood seven
and a half feet high
the weight would be
not quite five pounds.
The heart contracts about
70 or 75 times in a
minute, The frequency
diminishes from birth to
the end of life, Child
120 to 140 old age 60 to 80
Age, sex, muscular exertion,
emotions, and temperament
exert a controlling influence
over the hearts action
in the female it is more
frequent than in the male
it is increased after a meal
by rising from a recumbent
position, sitting or standing
time of day, In inflammations

and fevers the pulse is more frequent than during health, When the vital powers decline it is frequent and feeble, By the action of the left ventricle the blood is forced onwards and distributed throughout the whole body, by means of the aorta, and arteries The arteries are possessed of three coats, an external, nervous cellular, and middle the latter is composed of muscular fibres, and yellow fibrous tissue, The muscular coat is an important adjuvant, for upon it is dependant, the property by which the intermitted force of the heart is made equable and continuous

The contractility of the muscular fibres, which they have been shown to possess is concerned in regulating the flow of blood towards particular organs, this contractility is not visible at a distance from the heart, where the impelling power is almost void, The muscular coat has another function, that of regulating the diameter of the tubes, according to the amount of blood to be conducted through them. A very part this exemplified in the enlargement of the uterine and mammary arteries during pregnancy, These changes are owing to the power of contractility of the

middle coat, probably regulated by the sympathetic nerve which is distributed upon the vessels, In permanent dilitations of arteries, the walls are thickened as well as extended.

Aneurism is a disease of the arteries, by it we mean a pulsating sac filled with blood, which communicates with an artery, there are many kinds the true false dissecting circumscribed and diffused aneurism, The Aorta is the most liable to this disease, Besides the elasticity and contractility which has been described arteries possess another power that of slow contraction which the name of tonicity has been given

has been given, This property is seen when a ligature has been applied to an artery. The smaller arteries before they become capillary anastomose freely with each other, the object of which is to supply every part with blood, in case any important blood vessel should be compressed or obliterated, The capillaries are the smallest blood vessels there and their circulation may be distinctly seen with the aid of the microscope in the web of a frog's foot, The capillary circulation seems in a great degree not dependant on the hearts action since it has been seen to continue after the excission of the

heart, the emptiness of the arterial system after death although partly owing to the tonicity of the arteries themselves is partly due to the capillary circulation,
The process of secretion has been seen also to continue after death, as in the embryo, the blood circulates before the heart is formed and sometimes the heart is entirely wanting, the circulation must depend on the capillary power, although this circulation is not dependant upon nervous power its influence is yet manifest, — The phenomena of bleeding palsy are examples of morbid condition of the blood

vessels, through the agency of this system, The venous system arises in the small trunks formed by the union of the capillaries, and it returns the blood to the heart, These vessels have the same number of coats and properties as the arteries only not so strongly developed, the internal membrane is thrown into valves or folds to prevent the reflux of blood, the capacity of the venous system is greater than the arterial holding two or three times as much as the latter The venous is mainly due to vis à tergo assisted by the suction power of the heart, Muscular move-

ments aids much the venous circulation, and as the blood is prevented by the valves from being thrown back in the small vessels, it must be driven on to the heart — this is exemplified in blood letting, every movement of the hand increasing the flow of blood, There are several peculiarities in the circulation, in which the venous blood is sent from the heart, through a tube arterial in its structure, whilst the arterial blood is delivered to the heart through several venous trunks.
The Portal circulation is also peculiar, First — the ductus venosus, a supplementary vein situated at the thick edge

of the liver, and leading from the Umbilical vein to the Vena cava ascendens, then the Foramen Ovale, a communication between the two auricles also the ductus arteriosus a branch given off from the pulmonary artery, soon after its origin, which conducts the venous blood that has arrived at the heart from the head into the aorta, just below its arch, The blood after having been aerated by the placenta is collected by the umbilical vein, which carries it to the umbilicus of the child, after entering the cavity of the abdomen the current divides part went through the vena portarum to the liver the remainder

reaches the vena cava ascendens through the ductus venosus where it is mixed with the blood of the inferior extremities. The blood that has passed to the liver is collected by the hepatic veins, and also emptied into the vena cava ascendens, which finally discharges its contents into the right auricle of the heart, where it is directed by the Eustachian valve through the foramen ovale into the left auricle where it passes into left ventricle by which it is distributed through the aorta to the system; a large proportion going to the head and upper extremities. The latter blood is collected

by the Vena cava descendens and emptied into the right auricle thence in right ventricle from thence it is propelled through the ductus arteriosus into the aorta a small portion only passing into the pulmonary artery, thus we see that the liver only receives the pure blood from the placenta, every other organ the arterial and venous being mixed, after birth the current is changed by the establishment of respiration, and its division into the lungs, The Ductus Venosus, and arteriosus change into ligamentous cords, the foramen ovale shortly closes by the

apposition of its valve
the pulmonary artery and
vein become dilated to
receive the increased current
it sometimes happens
that there is a delay in
these changes, various
malformations hence result
We thus have what is
called Cyanosis in young
children, or the blue
disease, resulting generally
from the imperfect closure
of the foramen ovale,
This is a short ~~[illegible]~~ history
of circulation, and the
theory that is at present
prevalent.

Charles Lowndes

Jan 2nd 1855.

An Inaugural Dissertation on Acetate of Lead.

Submitted to the examination of the Provost, Regents, and Faculty of Physic of the University of Maryland for the degree of Doctor in Medicine

By Jacob Hay
of York Pa

Acetate of Lead

Under the different names of Lenipa Vetula, Sal Plumbi, and Saccharum Saturni, the acetate of lead has long been known to the medical profession. As early as the thirteenth century, physicians were acquainted with it, and in the beginning of the seventeenth century, Paracelsus a bold and comparatively successful practitioner of the chemical school of that day, recommended it in diseases of the chest, During the sixteenth and seventeenth century, we find its internal use advocated by men eminent in the profession, while at the same time, a strong array of authority is found opposed to its internal administration. As late as 1786 its internal use was proscribed

by Duncan, Cullen, and Sir George Baker, the latter of whom regretted that an article possessed of singular power in restraining haemorrhage, could not be used internally with safety, he just however, that in opposition to such authority, it was then administered internally with success, without any unpleasant effects, Dr. Reynolds in a letter addressed to Sir George Baker, says, that in a case of uterine haemorrhage he gave the Sal Plumbi at first to the extent of half a grain with two drops of Thebaic Tincture, and afterwards to the extent of two grains with four drops of the tincture made into a pill with a little conserve of roses, with the happiest effect on the haemorrhage without any injury to the bowels, a fact which he flatters

himself, Sir George Baker will learn with satisfaction, the experience of the profession from the time of Dr Reynolds, although it may have established the fact, that the acetate of lead is not destitute of deleterious powers, has yet tended to do away the prejudice against its use, and greatly to diminish the dread of its poisonous properties, Dr Chapman attributes to the elder Dr Barton, the credit of having in this country fully re-established confidence in the safety, and efficacy, of the treatment of certain diseases by lead, like many of the powerful therapeutic agents furnished by modern chemistry, though capable of doing a great deal of good, it may no doubt under unfavourable circumstances of administration, and constitutional predisposition do much harm.

and bitartrate of potassa, the alkaline and metallic sulphates, alum tea, lime-water, vegetable astringent, infusion of opium, the soaps, and milk. In pure distilled water it ought to dissolve entirely and form a clear solution. Common water, which uniformly contains carbonic acid, forms with it a milky solution, with a slight precipitate of carbonate of lead. This may be owing to the existence of some excess of the base of the salt, the oxide of lead, as the solution becomes perfectly clear by the addition of a portion of acetic acid.

When the acetate is swallowed in large quantities, it acts as an irritant poison, causing a sensation of burning in the throat, with great thirst, vomiting, and pain in the epigastrium, which is

sometimes followed by violent colic,
yet Dr Christison asserts, that the opinions
of physicians has proved, that it may
be given in pretty large medicinal doses
in practice, and although it may excite
colic when continued too long, ordinary
irritation of the stomach, seems rarely to
attend its use, Introduced gradually into
the system, by the use of small quantities
long continued, it is more apt to bring
on that peculiar variety of colic, known
as colica pictonum, which is often followed
by palsy, more especially of the extensor
muscles of the hands and fingers, with
violent neuralgic pains in different
parts of the system, and in violent
cases by a, apoplexy, of the many
symptoms of the effects of lead on the
system Dr Christison remarks no

is so invariable, or so characteristic, as the blue line near the edge of the gums, which was first described by Dr Burton. This blue line Dr Burton says may be seen on, as an evidence of the operation of lead on the system, with as much safety, as the cosperial taste of the saliva, is confided in, as an indication to withhold the farther use of calomel, for the purpose of avoiding the other symptoms of salivation, this sign is not however invariably followed by the unpleasant constitutional effects of lead poisoning, my father some time since attended a gentleman suffering with lead colic, he is sure could not be persuaded that his husbands troubles were the effect of living and sleeping in a new and freshly painted house, for she argued.

"I have slept in the same room without any inconvenience," they father on examining her gums, requested her to look in the glass, and she would find a "receipt in full" of the reception of lead into her system, that she had no pain, and by proper care, might avoid it, this lady never suspected, and yet there was no doubt upon the influence of lead on the system, among the many poisonous effects of lead Dr Stellstruck has placed inflamation of the epiphysis, an extreme unpleasant running or pricking sensation in the feet, from the operation of lead Swan son, last spring I visited with my father a lady who had for five months been treated by her physician for what he called a rheumatic affection, the suffering, she said, commenced with violent

pain in her bowels, with constipation, pain in the head and limbs. The medical treatment employed in her case we could not learn, but found her suffering almost constant pain in her lower limbs, with a peculiar sensation in the feet, feeling she said, as if they were pierced by thousands of needles, the pulse rather slow, skin cool covered with perspiration, bowels sluggish with occasional attacks of colicky pain, the "Kangaroo" appearance of the hands, immediately led to the suspicion that her trouble had been occasioned by lead; the gums were examined and the blue line which Burgmere pronounces the first and most frequent symptom of the presence of lead in the system, was found well marked, she was assured that all her symptoms were attributable

to lead introduced into the system by some means or other. After considerable enquiry as to the manner in which she could have imbibed the lead, both she and her friends insisting that it was impossible that she could in any way have been exposed to the influence of lead, it was ascertained that she had occasionally partaken of an article, very common in this neighbourhood, known by the name of apple-butter, a conserve prepared by boiling apples in cider to the consistence of a confection which had been kept in a glazed earthen vessel. The conserve was examined, and found strongly acid. It was of a very dark brown colour, excepting the portion where the glazing of the vessel, for the distance of three fourths of an inch adjoining the glazed surface, the conserve had lost its dark hue and

assumed a pink colour, and the glazing so far as the conserve reached, had been completely changed in colour, instead of retaining the shining mahogany hue of those portions of the vessel not touched by the conserve; it had assumed a dull grey appearance. This satisfied her friends of the plausibility of the opinion given as to the nature of her disease. Her bowels were kept open by the use of a pill of the Aromatic Extract of Colocynth. M. Reisens treatment with Hydriodate of Potash was adopted, with an occasional dose of morphia, as the pain in the bowels seemed to demand it, very little morphia was found necessary, under the use of the Iodide of Potass: the pains of the limbs, and other symptoms were relieved, and the partial paralysis and the blue

line along the edge of the gums, in the course of a few months disappeared. This no doubt was a case of poisoning from the malate of lead, formed by the action of the malic acid of the cider, on the oxide of lead in the glazing, yet the symptoms are similar to those produced by the slow poisoning with the acetate, Thomson and Berzelius, I know, consider malate of lead as an insoluble salt, yet M. M. Chevalier Olivier and Sages found that cider which had remained two days in a reservoir lined with lead, contained malate of lead in solution sufficient to produce violent colic, and other symptoms of poisoning by lead. Dr. Thomson is of the opinion that the poisoning quality of the acetate is attributable to its tendency to become

converted into a carbonate in the stomach, a change which he thinks may be prevented by mixing the acetate with vinegar; he considers the carbonate, the only preparation of lead that will produce colic, the experience of the profession is in opposition to this opinion, as we think the fact pretty well established, that the risk from the use of the acetate, is much diminished, by its administration in union with dilute acetic acid, some practitioners of this country believe, that if it be rubbed with a few drops of pyroligneous acid, in order to insure a complete solution of any carbonate of lead, and distilled water be added, and the whole then filtered through paper, we will good

need be feared from it use Dr Pilsbury
it is true contends, that it is a poison-
-ous salt, and that when mixed with
acetic acid, is more energetic than in
the neutral state, & joined to Pilsbury
concur in name Christison, Thomson,
and Burridge, the latter of whom had
for the period of twenty years
used it freely and safely, always in
solution, and never without acetic
acid, the most prudent course in the
use of it, we apprehend will be, to give
it in union with the acid, to closely
watch its effects, bearing in mind
that although it has been often and
free, given without any unpleasant
consequences, it has been known to
produce injurious effects under the
most judicious administration, yet

we are not to suffer ourselves to be deterred by dread of its poisonous power, from taking advantage of its therapeutic properties in circumstances favourable for its administration. The acitate of lead was early used as a therapeutic agent in diseases of the chest, and to this day is highly recommended as useful more especially by German Physicians, in Phthisis Pulmonalis, It is said to be particularly beneficial in cases attended with a copious purulent secretion, and in that variety of consumption, which depends on chronic inflamation of the mucous membrane of the bronchiae, and which is now most generally termed chronic bronchitis to distinguish it from tubercular phthisis, In these diseases

it generally arrests the debilitating night sweats, diminishes the copious expectoration, and relieves the cough. In colliquative diarrhœa common in the last stages of the disease, it is often highly serviceable in diminishing the frequency of the exhausting discharge. Dr. Henderson of Edinburgh, speaking of the bronchitic disorders of children occurring in connexion with measles and hooping cough, remarks that after a careful investigation of the powers of the acetate of lead, continued for several years, and based on ample comparison, both of personal observation and the reported experience of several practitioners to whom he had recommended the use of it, felt warranted in stating his conviction, that the

acetate is a remedy by far the most worthy of reliance, in bronchitis attended with profuse secretion, its chief value consisting in the rapidity of its operation in acute cases characterised by copious secretion, whether of the muco-purulent appearance or not, whereby the respiration is impeded, and suffocation threatened. In chronic mucous or muco-purulent bronchitis, he highly extols the remedy, attributing to it a power of controlling the quantity of the secretion to a degree not possessed by any other remedial agent. Dr Henderson in these affections regulates the dose by the exigence of the case, without much regard to the age of the patient, the quantity given to an adult, was not in his practice exceeded twelve grains in

twenty four hours, in doses of from one to three grains, while to a patient of six years, he gave in the course of ten days, as much as four scruples, the common dose for children being a quarter, half or whole grain, from eight to ten times a day, in no case in his practice, were the much dreaded effects of lead produced,

Powerfully sedative and astringent, the acetate of lead has been long and highly esteemed in the treatment of haemorrhage, By Dr. Dunglison the effects following the use of lead are said to be more ascribable in many cases, to the general treatment combined with it, than to the lead, Its action on the system is admitted to be powerful, and to detract from

it, any of the credit or good results following its administration, is as unfair, as it would be to attribute to the general treatment, the beneficial results in any case no matter what particular Hermetian remedy may have been given

The acetate is considered by many practitioners as applicable to all the different forms of haemorrhage, whether active or passive. Preceded by the use of the lancet, in the more active haemorrhage, it is undoubtedly one of the most powerful means of controlling the action of the heart and arteries, the latter during its use, according to Pereira, being reduced in size and activity, and the pulse rendered slower, and softer, usually as it may be in discharges of blood

from any part of the system, it is in haemorrhage from the unimpregnated uterus, that the acetate is most highly praised. Dr. Ellerton asserts, that "if ever there was a remedy which deserved to be considered a specific, it is surely the acetate of lead in uterine haemorrhage". Dr. Chapman not exactly willing to subscribe to this opinion, yet admits that bolding and judicious administration, it hardly ever fails of affording relief in all the ordinary "haemorrhages", and the experience of practitioners generally, has tended to confirm the high opinion of its powers in such cases, and establish the importance as well as general safety, of its use in large doses, in alarming haemorrhages

Dr. Lane in the Dublin medical Press, reports several cases in which large doses were followed by the happiest effects, after ordinary doses had failed to afford relief, and concludes by expressing the opinion, that in some cases a drachm or two might be given with perfect safety, Dr. Burridge, Physician to the Somerset and Taunton Hospital, gives an outline of ten cases occurring during an epidemic dysentery that prevailed in 1837, calculated to show the efficacy and safety of large doses, In the first case which was one of alarming haemorrhage from the bowels, the patient cold, and pulseless, the eyes fixed, and glazed, the tongue cold, and the cold dews of death

upon her, he gave her teaspoonful of brandy with a few drops of Spts Ammonia Comp, speedily followed by a scruple of the acetate of lead, in less than half an hour after this, he administered an enema of starch with half a drachm of the acetate, and gave the second scruple, one hour afterwards gave the third scruple, and had the happiness to see his patient convalesce, without farther haemorrhage and without any unpleasant symptoms from the lead, Dr. Burridge during twenty one years ample experience of this remedy has never witnessed a single untoward symptom from the therapeutic use of it, and Dr. Snelling of Abbotsbury, who in sixteen consecutive

days gave 576 grains of it, with the happiest result, remarks that the boldness with which he has administered the acetate, is not the result of mere speculation, nor of observations made in one month, or in one year, but rather of patient and careful watching for the long period of fourteen years.

In ordinary dysentery unattended by profuse haemorrhage, our remedy has advocates in this country. Dr. Batchelder of New York, recommends the acetate in doses of from two to six grains combined with opium, the dose to be repeated in an hour, if the discharges continue he advises a repetition of the dose after each discharge, without regard to time, always however commencing the

treatment by bloodletting in cases attended with full, frequent and hard pulse, so the inflamed mucous membrane of dysentery, from its sedative astringent and desiccative properties, he considers the acetate a most appropriate application, and advises its use as an enema, he directs ij grains of lead to an ounce of water with from thirty to fifty drops of laudanum, to be injected slowly, retained as long as possible, and to be repeated according to the frequency of the passages, if a larger quantity of water be used in preparing the enema, it will distress by distention, and if more acetate be employed it may prove too irritating to the inflamed bowel,

At the suggestion of Dr Bardsley,

several clinical experiments were made by Dr Evans, with a view of ascertaining the power of the acetate of lead, in that form of diarrhoea which comes on toward the termination of fever, and generally ends in ulcer-
-ation of the Peyerian glands, and it proved in many instances highly useful in controlling the superabund-
-ant secretion, He found it beneficial not only in the diarrhoea dependent on ulcerations of the mucous glands, but also in that species of diarrhoea which occurs at an earlier period of fever, and by means of which nature attempts the relief of internal congestion. From his experience of the utility of large doses of it in many cases of diarrhoea, he was induced to try the acetate in cholera, and found that

in all cases where medicine promised any chance of relief, its use was attended with the best effects, claiming the credit of having introduced to the notice of the profession, the advantages of large doses of it in cholera, he felt happy in having discovered a remedy possessed of more power in arresting the exhausting discharges of cholera, than any other means known, He directed a scruple of the acetate of lead, with one grain of opium, to be divided into twelve pills, one to be given every half hour, until rice-water discharges began to diminish, after which the interval between the doses to be prolonged, this treatment in Dublin, became universal, and the number of deaths proportion-
-ally diminished. In cholera infantum administered in doses of from one

sixth to one fourth of a grain, combined with a minute portion of opium, it will sometimes quiet the irritation of the stomach and bowels when other remedies have failed to be of benefit. We have some cases reported, in which our remedy appeared to have rendered less frequent the attacks of epilepsy, without however having in any case effected a cure

In flatulent distention of the bowels depending as it sometimes does, upon a want of tone or muscular power in the bowels, the acetate has been found to afford relief, where besides the ordinary means large doses of alum had been administered, Dr. Graves speaks highly of the anti-lymphatic properties of the sugar of lead. In tympanitis combined with diarrhoea in the middle and

latter stages of typhus fever, it was very successful in his hands.
In bilious fevers, where inflamation of the mucous membrane of the alimentary canal supervened, Dr. John Tilley of Lancaster speaks in high terms of the acetate of lead, In typhoid fever, or where bilious fever assumes that form, he uses the lead to the exclusion of every other so called febrifuge, He gives it in doses of from two to four grains, in a teaspoonful of vinegar and three or four teaspoonsful of water, every three or four hours, This practice the Dr. in a letter to my father, says originated with himself and is now much used by physicians of his neighborhood, Being a decided sedative, lessening the force, and frequency of the pulse, and having a direct influence

in relieving mucous inflammation, it would seem in such cases to be an appropriate remedy Dr Stoke may claim the credit of having introduced into his neighbourhood, the the use of lead in fevers, but that it had been employed in fevers long before Dr Stoke's time, we have evidence in the remarks of Dr Cullen, on the dissertation of Wunderlemark on the internal use of lead, Dr Cullen though opposed to the exhibition of lead admits, "that Wunderlemark had no doubt upon some occasions found the saccharum saturni moderate the activity of the system in fever, for it appears that other practitioners had formerly employed other preparations of lead in fevers"

So as the most novel application of

the acetate, as its use by injection, in strangulated hernia, a practice instituted by Storey and Gill. Dr. Stanhold gives the history of several cases treated on this plan, in one of which the hernia had resisted all efforts to reduce it for twenty eight hours, ten grains of the acetate dissolved in six ounces of lukewarm water, were injected into the bowel, and the injection repeated every two hours; the pulse which had been small, and contracted soon became more developed, and from hour to hour, the general condition improved, the man fell asleep, and the bowel spontaneously returned. In another case, where the strangulation had continued for three days and given rise to the worst symptoms the patient's condition improved

much after the use of the clyster, and the rupture was easily returned by taxis, So depend upon such treat-
-ment, however in strangulated hernia, would we conceive, be an unjustifiable trifling, if not a criminal tampering with the life of a patient. Ephemerally the acetate of lead in solution, is fre-
-quently employed for the reduction of inflammatory inflamation, either by applying cloths saturated with a solution of it or using a poultice made with it, and crumbs of bread, This poultice is found to have a kind and soothing effect, in cases of inflamed haemorrhoidal tumors, swelled testicle, and other external inflamations, The solution for such purposes should be of the strength of from Two drachms, to half an ounce, to the pint of water

In common inflamation of the eye, a weaker solution, of from one to two grains to the ounce of water, is often advantageously used, provided general epitesment be kept down, by bleeding purging, and an antiphlogistic regimen, This weaker solution of the salt is also frequently used with much benefit, as an injection in gonnorrhoea,

To treat of the different poisonous effects of the acetate of lead, whether they be the result of large doses, manifesting themselves in all the ordinary symp-toms of irritant poisoning, or whether they be the consequences of the long continued and gradual introduction of smaller doses, as colica pictorum, paralysis &c &c would require us to say much more than is expected of us

on this occasion, suffice it to say that when a large quantity has been taken, and vomiting does not ensue, an emetic of sulphate of zinc, followed by the use of either the sulphate of magnesia, or sulphate soda, with a view of converting any portion of the acetate that may be left in the stomach, into the sulphate of lead, which possesses very little, if any activity as a poison, If the symptoms do not yield to these means, and indications of the existence of gastric inflammation supervene, the ordinary remedies of gastritis, as general or local bleeding, blistering, the warm bath, warm fomentations, counterirritant, should be employed, If the poisoning be the effects of the long continued

operation of smaller portions of the acetate, exhibiting itself as colica pictonum, paralysis, violent neuralgic pains in different parts of the system, although in colica pictonum, it may sometimes be required to bleed, to use the warm bath, and resort to large doses of opium and calomel, with active purgatives; and while in paralysis we may employ electricity, blistering, stimulating liniments, or sulphurous baths, and give strychnine internally, there is no means which will so effectually relieve, or rid the system of the poison, as the Iodide of Potassium. It shows injuries, that in lead poisoning the metallic substance is in actual union with the affected part or parts, and is retained there, in the form of an

insoluble compound, and that the iodide of potassium is absorbed into the blood, combines with the metallic poison, and forms with it a new and insoluble salt, liberates the poison from its union with the injured part, dissolves it out so to speak from the damaged fibre, and sets it once more afloat in the circulation. This new compound he believes to be eliminated through the kidneys, as soon as formed, that lead, which may be distinguished from that naturally existing in the blood, has been found in different organs of persons who have died from lead poisoning, is we believe, an established fact. Orfila found lead in the liver of a lead patient, and by others it has been found in the brain, lungs, kidneys,

and muscles, Dr. Mitter at the Kings College, detected it in abundance in the paralyzed extensors of the hand, in a subject who died of mad epilepsy, say, In the 5th Vol of the British and Foreign Medicothirurgical review, a case is related in which the body of one reported to have been poisoned, was disinterred, after nearly two years burial, and the lungs and other organs were found to contain lead; several grains having been reduced from three ounces of every substance, and what is considered remarkable in this case is the fact that some of the acetate found though partially reduced, was not completely decomposed, whether it returns view of the modus operandi of his remed, be correct or not we

are not prepared to say, but of the beneficial effects of the Iodide of Potassium in lead poisoning, we are pretty well satisfied, We saw the favorable operation of it, in the case to which we have already reffered, as a case of poisoning from the malate of lead, and my father relates a case which occurred long before the publication of Nelsons plan of treatment, in which the Iodide had been given with the happiest effect, The patient had been suffering at intervals for several months with colic, and constipation, with violent neuralgic pains in different parts of the system, When called to see her she was suffering most excruciating pain over the left eye, which had continued uninterruptedly for about ten hours,

with obstinate constipation of the bowels, satisfied from her history of the case, that her troubles were the effects of lead, three sisters and their mother having been similarly affected from having slept in a fresh, painted house, he told her that the pain did not arise from <u>inflamation of the brain</u> as her former physician had represented, but was a violent neuralgic affection; the effect of lead poisoning, the prescribed for the time, liberal doses of morphia which relieved her suffering and used the croton oil with extract of colocynth to move the bowels, Dreading the operation of calomel in a case where the scrofulous habit was so strongly marked, he prescribed the Iodide of Potash, not with any hope of benefit from its

chemical action upon any com-
-pound of lead, that might be in
the system, but with a hope that it
might do good by increasing the
action of the absorbent, and as a
general alterative, By a perseverance
in the use of the iodide, the patient
was gradually and effectually relieved
My father has used it successfully
in several cases, and without pre-
-tending to give its modus operandi
has great confidence in it as a
remedy for lead poisoning He has
known the blue line of the gums to
be removed by the use of that remedy
alone, without any local application,
although Sanquerel asserts that the
discoloration can not be removed
without much difficulty and that
it is only by frictions repeated

several times a day, and the use of water acidulated with sulphuric or hydrosulphuric acid, that it can be completely cured. Experiments lately made in the New York Hospital seem to confirm the correctness of Reisen's views of the action of the Iodide. In many of the cases of lead poisoning treated successfully in the Hospital on Reisen's plan, the urine was found after the use of his remedy, to contain the iodide of lead, while no trace of lead could be detected before the use of the iodide. We are satisfied from the results of cases treated in the New York Hospital, and from what we ourselves have seen of the power of the iodide in such cases, although we would not fail to employ the ordinary remedies, to relieve the urgent symptoms of lead poisoning, we would with

great confidence depend upon
the powers of the Iodide of Potassium
to eliminate the poison from the
system

An Inaugural Dissertation on Auscultation;

Submitted for Examination to the

Provost, Regents and Faculty of Physic, of the

University of Maryland, for the

Degree of Doctor of Medicine, by

Joshua Hester Loring
of
Maryland.

Treatise

on

Auscultation

1833

Auscultation in its technical sense, is the act of listening to sounds which are developed in the interior of the body. It may be practised by applying the ear to the surface of the chest, either immediately, or through the intervention of some conductor of sound interposed between the ear of the listener, and the person of the patient. The former of these methods constitutes immediate auscultation, while the latter is denominated mediate. A careful consideration of auscultation, constitutes the most important means of diagnosis, that can be employed in the direction of diseases connected with the respiratory apparatus. Prior to its discovery by the justly celebrated Laennec, pathologists vainly endeavoured to give precision to that, which it has clearly made known. This discovery indeed have tended so much to extend the boundaries of medical knowledge, and exercised a single one have thrown so

much important light, upon some of the previously dark and mysterious points of pathology. It may be practised in two stated in two different modes. Laennec proposed the immediate, or [illegible] phrase used an instrument denominated the Stethoscope. Many at the present day are in the habit of practicing this method of auscultation, and prefer with the great pain to the disease, to [illegible] instrument. Some forms of disease, and particularly those of a cardiac nature, are certainly most advantageous [illegible] by means of the Stethoscope. but in diseases of the respiratory apparatus, which shall alone be [illegible] to in this [illegible], there can be no doubt that the ear is the best and most convenient instrument. By this plan the body of the patient becomes an important means of support to the head, thus frequently avoiding an unnatural and sometimes

painful position, and rendering the listener more capable of concentrating his whole attention upon the sounds which are developed. It is more convenient from its facility with which it may be applied, and from the fact that it is always at hand. There are very few cases in connection with respiratory disease that need render the stethoscope preferable to the ear. From a point of delicacy in cases of females, it may sometimes be preferably used. It may also be advantageous where from extreme emaciation there exists a hollow beneath the clavicle that cannot be conveniently reached by the unassisted ear, or when cavities exist in other portions of the thoracic walls, as sometimes results from Pleurisy. In performing mediate auscultation, the surface of the chest should either be naked or covered by some light and light-sounding texture, so as to avoid any rubbing sound which

might confound the sounds of the Chest, and markedly embarrass the examiner. A clean bed is very convenient for the purpose of thumping on the Chest without making an examination, where from uncleanliness it would not be [illegible] as upon the naked surface, [illegible] this became necessary in Cases [illegible].

In using Auscultation as a means of detecting diseased conditions of the respiratory apparatus as indicated by morbid sounds given out, it is of course necessary to be thoroughly acquainted with those sounds which manifest themselves in healthy conditions. Although the sounds which are produced even in perfect health in different individuals, will frequently vary in such a degree as to [illegible] that which would be [illegible] in one, decidedly morbid in another yet with proper care and attention this need not render the examination [illegible]

less satisfactory or the diagnosis in certain.
In order therefore to obviate this serious difficulty, it will be necessary to make a careful comparison of the two sides of the chest, and also to examine the patient in different stages and states of respiration. Certain particular conditions will sometimes bring peculiar sounds into view which might otherwise escape the notice of the acutest ear. Thus the patient should be examined while he is breathing in the ordinary manner, and then he should be directed to take a long breath, hold his breath for a time, exhaust his lungs partially or as perfectly as he can, breathe quickly, or any other modification may be indulged in, that will serve to supply materials for correct and unequivocal conclusions. The sounds which may be detected by auscultation are not those accompanying inspiration and

aspiration, and secondary [illegible] to the [illegible], including [illegible]. There are two distinct sounds recognized by auscultation in the healthy state of the lungs. First, the vesicular, or that sound which is produced by the air passing from the air-cells of the bronchia into the air-cells. Secondly, the Bronchial or Tubal sound, because it depends upon the movement of air through the bronchial tubes.

The vesicular sound or as it is sometimes called the respiratory murmur, may be heard much more distinctly during inspiration than expiration. During the inspiratory act as the air passes along the minute tubes and enters the air-cells, it causes vibrations which are very distinctly audible. It is supposed also that the dilatation of the air-cells themselves have something to do with producing this sound. It is very indistinctly heard during expiration. Indeed it is so feeble during this act as

to render it almost imperceptible. This is undoubtedly owing to the fact, that the motion of the air is not communicated in the circuits, and is consequently quite so gentle as to give rise to anything more than the most delicate sound. When we consider from whence the circuit sound proceeds, we would, of course, expect to find it most markedly heard at those points at which the two cords come in contact with the sounding board. This sound was compared by Laennec to that of deep inspiration of a diseased man. Dr. Davis thinks it resembles the sound made by a piece of wire, of which the tube does not click. It does unquestionably partake of these two sounds, but I think a better illustration of it is that of the rustling of green leaves, when agitated by a gentle breeze. It is a peculiar sound however and is perhaps somewhat distinct from all other

sounds, and a better notion of it may be gained by applying the ear to the chest for one minute, than could be conveyed by a volume of description. The sound may vary very much in different individuals, and all be ranging within the limits of perfect health. It may also vary exceedingly at different periods and in different conditions in the same individual, during all of which the structure of the respiratory organs may be in a perfectly normal condition. Anything that tends to hurry respiration, will cause it to be louder and more distinct. When it is heard louder than natural, it is said to be puerile from the fact that it assimilates the breathing of children, which is always louder than that of adults. And as this sound is louder and much more distinctly heard in early life, so in old age it is much more feeble and less clearly heard, and

is consequently called Resile. In [illegible] it may suspect the presence of [illegible], when corresponding points of opposite sides of the chest do not give [illegible] sounds. The comparison that is made between the two sides of the chest forms one of the most important elements in our diagnosis. Without it errors might be daily committed, and dangerous conditions of the organs overlooked.

The Bronchial or Tubal sound is, as its name indicates, that sound which is produced by the air passing along the larger bronchial tubes, and is similar to the sound produced by the rapid passage of air through any tube exterior to the body. It is heard most distinctly over the large bronchial tubes, and those which are most superficial. As they become smaller, and ramify more deeply into the parenchymatous

structure of the lung, the sound becomes more and more indistinct. When thus from the diminished calibre of the tubes, and from their deep seat in the pulmonary structure, the bronchial sound has become diminished in its intensity, while at the same time the vesicular sound is com-mingled with it, a sound is produced which has received the name of rough, rude, or harsh sound. The bronchial sound as heard over the large bronchial tubes, is entirely different and distinct from the vesicular sound. It is much louder and harsher than the latter. It differs from it in the fact that it is clearly heard both during inspiration and ex-piration, and that there is a distinct interval between these two acts. The bron-chial sound is more audible on the right than on the left side, from the obvious reason that the calibre of the right primary bronchus is greater than that of the left.

These two sounds, the vesicular and Bronchial, are the sounds which are heard in healthy respiration; when the lungs are normally performing the great function which is assigned to them in the animal economy. As these great organs of respiration are frequently the subjects of morbid affections, and as the delicate ramifications of the bronchial tubes, as they conduct the air along their passages to the minute cavities, these causing vibrations which give rise to the gentle sighing of the respiratory murmur have their cavities obstructed or obliterated, so as a necessary consequence must we have this delicate sound materially modified. The Bronchial sound is also subject to great natural irregularities. First as to the modifications of the vesicular sound. It may become unnaturally loud or weak. Anything that will interrupt the proper performance

of the function of a portion of the lung, thus causing the remainder to perform a duty above that which it is accustomed to performing, will give us a morbidly loud vesicular sound. This condition may arise from compression of the lung, caused by the effusion of serum into the pleural cavity. It may also result from the presence of tumors, or from obstruction in the large bronchial tubes, the minute tubes, or in the vesicles. A dilitation of the latter so as to restrain their proper function will sometimes produce the same result. If the respiration be more hurried and quicker than natural, it will produce an abnormally loud vesicular sound. When the sound is unnaturally weak, it is also the result of obstruction which may occur in the large tubes, so as partially or completely obliterating their cavities, in the minute tubes, or in the

air cells filling up their cavities, or otherwise impairing their function. The sound of the sound is liable to modification. We may have the sound coming on very irregularly or interrupted, coming by jerks, as in Pleurodynia &c, and from the extreme pain produced by the respiratory act, the patient is forced to sighing respiration in a low manner. Irregularities may also arise from a partial resistance to the ingress of air through the bronchial tubes, which however cannot completely resist the respiratory movement, in consequence of which the sound which was entirely inaudible at first, will be distinctly heard at the middle or close of the act. Alterations may also occur in the character of the vesicular sound. When the structure of the lungs has undergone a degree of consolidation, thus changing the nature of the pulmonary

tissue from that of a porous and spongy structure, to one of [illegible], thereby rendering it a better conductor of sound, the respiratory murmur will in consequence of this condition be commingled with the bronchial sound, and give out a rude or harsh sound. Modifications of the bronchial sound are also of frequent occurrence. Consolidation of the pulmonary tissue is most generally the cause of the alteration in this sound. Vesiculo bronchial sound may be heard over portions of the chest in disease, at which in the healthy condition it would be entirely inaudible. It results from an impervious condition of the pulmonary structure, together with an obliteration of the air cells. Thus the air is permitted to pass freely through the larger tubes, whilst it is entirely excluded from the more minute tubes, and of course prevents

In consequence therefore of the condition of the tissue of the lung, and of the obliteration of the air-cells, there is a better medium through which the sound is transmitted to the ear, and sounds which were previously quite inaudible to the sense of hearing, will now reveal themselves in a marked degree. This sound may also be produced independently of consolidation of the pulmonary structure. It is sometimes the result of dilitation of the tubes, but in all such cases it is heard in connection with the vesicular murmur. The modifications of the bronchial sounds are heard both during inspiration and expiration, but the sounds do not observe that distinct interval which is due to them in health. Bronchial respiration may be limited to a very small space, or diffused over a considerable extent of lung. In the former

instance it proceeds from the lungs only, and is of a loud and distinctly metallic character. In this condition it receives the name of Bubbling rales. In the latter it emanates from numerous small tubes. Cavernous respiration constitutes another modification. It is produced by the air passing into a cavity. It is strongly metallic, and is of a decidedly tympanitic character. It resembles very closely the sound which may be produced by blowing into a cavity formed by the two hands joined together. When a cavity of considerable size exists, bounded by firm walls, the metallic sound is augmented and receives the name of Amphoric. These sounds are generally heard both in inspiration and expiration, more distinctly however during the former. There are other sounds which are not, as those hitherto mentioned, modifications of the healthy

bronchial sound, but are distinctive in their character, and are generated by disease. These sensible rhonchi are called rhonchi and are divided into two great classes. the dry and the moist.
The dry consist of the sibilant and the sonorous rhonchi. The moist are divided into the Mucous, Crepitant and Sub-crepitant.
The sibilant rhonchus is a hissing or whistling sound, produced by the air passing through the bronchia when from any cause their calibre is unusually small. It is much more frequent in the small tubes, but may under certain circumstances be heard in the larger tubes as for instance when their cavities are so obstructed as to admit only a small stream of air. The calibre of the air tubes may be diminished from several causes. It may result from a thickening of their mucous

membrane, from spasmodic contraction of their muscular coat, or from mucous contained within them. This sound may be confined to either act of respiration or be heard in both.

The Sonorous Rhonchus differs materially from the sibilant. It is of a graver character, and is compared to the cooing of a pigeon, the snoring of a man in deep sleep, or the sound given out by shaking the bass strings of a violin. It is most commonly heard during expiration, but may be heard in both acts. The sound is sometimes exceedingly well-marked, while at other times it is so feeble as to be scarcely perceptible. It can only be generated in the large bronchial tubes. It is most [illegible] occasionally with the sibilant and [illegible] rhonchi, which modify the sound, [illegible] give it a peculiar crackling [illegible]. Hurried and forcible respiration [illegible]

will speedily restore it to its [illegible] or
order.

The Mucous ronchus is heard in the lar-
bronchial tubes, and in all those hav-
a calibre not less than that of a
common quill. It is heard during
both acts of respiration, and depends
for its origin upon the irregular bust
-ing of bubbles of liquid, namely
blood, mucus or pus. It is markedly
modified by the association of the
Sibilant and Sonorous ronchi, occurring
frequently in that stage of Bronchitis
when the mucous membrane is pass-
-ing from the dry to the secreting state.
This modified sound is very peculiar,
and has been compared to the chirp
-ing of various kinds of birds at the
same time. In the smaller tubes the
sound is, of course, weaker, and some
have termed this the Mucous rochus.
When a cavity exists communicating

with a bronchial tube, or a bronchus be dilated and contain fluid, the sound evolved is more bubbling, coarse and gurgling. Then the phenomenon, and is denominated cavernous rhonchus. It is usually confined to a comparatively small space, except when it depends upon dilitation of a bronchus in which case it may be much more diffused.

The crepitant rhonchus is a fine, regular sound, similar to that which may be produced by rubbing a lock of hair between the thumb and fingers close to the ear. It has also been compared to the crackling of salt, when thrown upon burning coals. A difference of opinion has existed with regard to the cause of this sound, and pathologists at the present day are divided upon this point. It is thought by some to depend upon the presence of a

tenacious secretion within the minute tubes, which during inspiration pass to a series of minute bubbles, thus constituting the capital crackles. This is it is thought to be due to the separation of the walls of the aircells, which were agglutinated by previous exudation. Another theory however and one which seems to be most reasonable has been advanced and advocated by some of the most able pathologists. It depends according to this theory upon an effusion into the interstices between the extremities of the minute air-tubes, thus compressing them and preventing air from readily passing through and entering the aircells. In inspiration, however, particularly if it be somewhat forced, the strong current of air separates the extremities of the tubes, and makes its way into the aircells, thus causing the peculiar sound.

It is an acknowledged fact that Coughing will not remove this sound, as it does case with the other varieties of the mucous rales. If therefore it depended upon the presence of a fluid within the tubes, it would be reasonable and natural to expect its removal by the act of Coughing, and consequently a temporary suspension of the sound. This not being the case certainly offers a strong argument in favor of the theory which ascribes it to intercellular effusion. If it depend upon an effusion external to the air tubes and cells, the act of Coughing could not possibly affect it, and the sound to which it gives rise would consequently remain unchanged. It is only heard during the act of inspiration.

The Subcrepitant rales occupies a position between the Mucous and the Crepitant. It is compared to the sound

which is heard by placing the ear over the bung hole of a cask immediately after the bung has been removed. It depends upon the bursting of very small bubbles, which are formed by air passing through a fluid secretion contained within the minute ramifications of the air tubes. The sound is finer and more regular than the mucous rales. It is heard in both act of respiration.

Metallic tinkling is a sound requiring for its production the presence of a cavity. It is generally heard when the cavity contains both air and a liquid. By some the presence of liquid is not thought to be absolutely necessary. The causes which are by far the most frequent in the production of this sound are the bursting of bubbles of air upon the surface of the liquid, or the falling

of a drop of fluid from the walls of the cavity into the liquid. It is a quick, sharp sound resembling very much the sound produced by letting a small shot fall into an empty decanter.

Friction sound, rubbing sound and fro sound as it is variously denominated, is a morbid sound produced by the rubbing together of the pulmonary and costal pleural surfaces in disease. In a healthy condition these serous surfaces are perfectly smooth and constantly lubricated in such a manner as to allow them to move over each other with the most perfect ease and freedom, and without the least perceptible degree of noise. But when inflammation attacks the membrane, lymph is poured out and deposits upon its surface. The natural smooth condition of the

membrane is thickly coated with
of a rough nature by recent
depositions of lymph, and as the
surfaces now place are rubbed
the friction sound is rendered quite
audible. It may also be distinctly
heard previous to the period set
of lymph, when the membrane is in
-dered dry by the incipient stage of
inflammation. This sound varies very
much in intensity, being in some
instances very loud causing uneasiness
of the chest which are alleviated
upon the application of the hand,
and may sometimes be felt by the
patient himself. At other times it
may be so weak and faint as to
be scarcely heard at all. It is most
audible during inspiration, but may be
heard in both acts of respiration.
The friction sound produced by the
rubbing together of the roughened

pleural surfaces, may be heard in
with the sound given out by the
pericardium when in a similar state.
This condition however need not
be met with in diagnosis. If the
pleura be the seat of disease and
the source from which the sound
emanates, and the patient be di-
rected to hold his breath for a
time, the sound will of course
be at once suspended. But if it
be the pericardium and the patient
be again directed to hold his breath,
the sound will continue as before,
and will be synchronous with
the action of the heart.
The vocal resonance or sounds of
the voice, includes cough and all
sounds above the breath that are
created within the larynx. In order
that the various modifications of the
voice may be recognized, it is requisite

important to be acquainted with the sounds which are heard in these conditions. If in a healthy subject the stethoscope be applied over the larynx in front, the sound will be loud and can be heard with considerable distinctness. It is known as Bronchophony or Bronchophony. Bronchophony is heard by applying the instrument on either side of the superior part of the sternum, between the scapulae behind, or in the axilla. In these situations the instrument sustains such relation to the primary bronchi as to hear the voice, though feebly and without distinctness of articulation, audibly transmitted to the ear. Over the remaining parts of the chest the voice is sometimes not heard at all, or if heard, it is exceedingly obscure and confused. In this condition it has the name of Pectoral resonance.

The difference in intensity of the vocal resonance in these different situations must of course be expected, when we consider the various sources from which it emanates. In Pectoral resonance for instance, the voice is weak, obscure and confused from the fact that it is broken up and carried to the numerous small tubes, in connection with which it is buried deeply in the parenchymatous structure of the lung, remote from the ear, and having intervening between it and the ear, the spongy structure of the pulmonary tissue which is an exceedingly bad conductor of sound. In Bronchophony the sound is less audible than in tracheophony, from the fact that it has suffered a division by the bifurcation of the trachea and is thrown into two channels. In Tracheophony however, the whole volume of the sound is

contained within the bronchi, are exposed to division or breaking up, and is consequently heard in its greatest intensity. Bronchophony is more audible on the right than on the left side, owing to the greater size of the right primary bronchus. The voice will be more distinct in thin persons than those who are fat or very muscular. There is a very great difference in different individuals with regard to the intensity of the vocal resonance, and in forming a diagnosis from this source reference must always be had to the Comparison between the two opposite sides of the chest. The patient should be directed to make use of the same voice in speaking during the entire examination. The sounds of the voice heretofore mentioned appear in a healthy condition of the respiratory apparatus.

They may be morbidly altered by disease and a series of non-conducting substances to them.

Bronchophony when heard in other parts of the chest than those to which it belongs in natural and healthy conditions, is most generally a symptom of disease. Anything interposed between the bronchi and the ear which is a better conductor of sound than the pulmonary structure itself, will render bronchophony audible. Thus it may be the result of consolidation of the lung, or compression of the organ, effusion of fluid into the air cells, interstitial space, or pleural cavity. A morbid enlargement of the bronchial tubes may also give rise to this sound.

Aegophony is a modification of bronchophony. It is a tremulous, quivering sound, resembling very much the bleating of a goat, from which it derives its name. It depends upon the

intervention of a stratum of liquid between the lung and the walls of the Chest. As the sound passes through the fluid, it produces in it an undulatory movement, which gives rise to the peculiar bronchial character by which the sound is recognized.
Pectoriloquy is a morbid sound depending upon the existence of a cavity, communicating freely with the bronchial tubes. If the ear be applied to the surface of the Chest, immediately over the seat of the Cavity, the voice seems to enter the ear directly through the walls of the chest.
The sound of the voice is not only heard, but the articulated words are distinctly audible.
Amphoric resonance depends also upon the existence of a Cavity, communicating with the bronchial tubes, but differing from Pectoriloquy in the

fact, that the communication is by smaller apertures, and that the voice is not articulated. The sounds of the voice reverberate through the Cavity, and thus give rise to the metallic ringing sound which is peculiar to, and characteristic of, the tympanitic resonance

Cough of itself, does not reveal much valuable information to the auscultator. It is often used however, and frequently subserves a useful purpose in bringing forth other sounds. The deep inspiration which always follows it may in many cases afford an opportunity of detecting valuable signs, which could not otherwise be brought forth. This is the object for which it is most generally employed.

An
Unusual Condition
on
Typhoid Fever
Submitted to the Examination
of the
Provost, Regents, and Faculty
of Physic
of the University of Maryland
for the Degree
of
Doctor of Medicine
By
Wyndolt Bu[illegible]
of Ohio

Ontario, or Upper Canada.

[illegible]

[illegible] Constitution in all its form [illegible] the United States, and the United States in which the Constitutional Bill of Rights does not prevail, and is more or less mingled with the laws [illegible] question. be some it is denominated Common law, or [illegible] Law, but the [illegible] the term [illegible] as other [illegible] laws [illegible]. If [illegible] of the fact, that the Constitution is not [illegible], and

that it begins in the [illegible]
without any [illegible]
to those which emanate from
fevers. There is the strong presumption,
that any [illegible]
equally assume the [illegible]
within [illegible]
it [illegible] intermittent fevers,
and all the Paramata may be
[illegible], as well, though not as
frequent, as the one in question.
Almost all fevers, are more or
attended with more [illegible]
as [illegible]
[illegible]
[illegible] to [illegible] the fact, that [illegible]
is distinguished from all the
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible]. [illegible]
attended occasionally with

disease of the Bowels, and always not Contagious. It is that which alone is called, with of this disease, as the Eruption is of Small Pox.

It is then Contagious disease, and is attended with usual symptoms of Fever, but it seldom occurs in the Country, it more frequently comes on insidiously and increases gradually, so that it is in some time, in the first time Commence at the Patient Complaining was general uneasiness, sore of the Limbs, together with head & the skin is heated, the eyes and the pulse accelerated, a tongue is found to be coated with a thick white

fus; the abdomen is small & hard. The distended bladder contains a large quantity of clear pale straw tinted fluid, & during the period, the pulse can scarcely be felt, & the body is found to be cold. When bleeding demanded, well bled, the bleeding ceases, and does not return, unless, perhaps, a second should set in, which rarely happens during the stage of recovery. The Powers of the Animal to Caverna; if this should not be the case there often an Eliminative process, in the act of Cathartic Medicines, which Cannot be much more or less than usual. The disease now beated, assumes more the

ordinary form of Fever; even a frequency of pulse, heat of the skin, flushed face, pain in the head, constipation, thirst, and great general uneasiness. The pulse, in some instances is but slightly accelerated, not equal, fluttering in the minutes, and then, in some cases, irregular; in others, the pulse is small, and compressible, often amounting to 100 to 120. The flush in the face is somewhat more purple than in most other constitutions; and, when it is absent, there is not unfrequently a change for the worse in the constitution, with vomiting and delirium or the hypochondriac. Headache, in some degree, is very seldom absent, and not unfrequently is the great source of complaint. The Patient complains

of pain in his back and limbs, and usually a change of scene is. Sometimes there is great exhaustion, and most of the symptoms, including at the onset, usual occurrence. He has a very strong character, remarkably assumes the unwilled character, though not so well marked as Lilium tigrinum, or Cypripedium. These symptoms gradually increase for some days. The pulse then becomes more prominent and less strong; the heart's beating is attended with a feeling of weight. There is more flushing of the face, the tongue becomes more thickly coated, becoming dry and brown, and at times becomes red and hot at the tip and edges; the abdomen begin most cases is but slightly affected, yet, in some cases it is

irritable, pain in general is
principally felt in the right side, it
is in the right Hypochondrium
upon pressure a dull
painful distension in the
Bowels is discovered upon pres-
-sure, with a gurling sound.
Bronchitis, is an affection
of the system, & mucous membrane
of the lungs, sometimes
the Pony day, and commu-
-cement of the disease. At first
fever sometimes ensues
and the tongue becomes white
then assumes a brownish cross
with a tendency to dryness,
with pain and distress in the
epigastric region, the abdomen is tes-
-tense distended, so as to prevent
a convex outline from being
formed cartilage to the sternum,

Upon the patient rest on his back.
On examining the Body, red, red
like flea bites will show them-
selves, usually appearing first in
small patches on the trunk
but at rounds extending to the
face and limbs. Upon close
inspection there may be seen
small vesicles, called vesicles
upon the neck and upper part of
the trunk, and sometimes on the
part of the face. The
vesicles soon become umbilicated.
Children complain of the
severe headache with which the pat-
ient has been troubled. Vomiting
often sets in the 2nd or 3rd day
~~after~~ ~~the~~ ~~eruption~~ convulsions often attend
the vomiting.
The tongue is often furred, with the
difficulty and pharynx is
the seat of the disease. Towards
a complete recovery the skin is

at length developed. The tongue is often encrusted with a brown or black coating, or is dry, cracked, and sore; while black is deposited upon the teeth, gums, and lips. The pulse becomes feeble and rapid, and sometimes the surface of the body becomes cold, and the patient sinks, with an ~~the~~ unusual stupor, arising from the cold. The patient is weak and feeble, often sliding down in bed; picking at the bed clothes, or at imaginary objects in the air; muttering incoherent, delirious sentences, or in a profound comatose state, from which he can rise from his bed. Sometimes involuntary evacuations of fecal matter often occur; also hemorrhage from the bowels, Pleura & the mucous skin

If the case is terminal a gradual, the pulse grows weak & the extremities cold, subsequently, but [illegible] slow and regular. Gradually the extremities become cold, the [illegible] on the whole surface is bathed in the cold sweat, & [illegible] delirium and in most cases the patient dies in a state of insensibility. If accompanied by congestion of the lungs, the breathing becomes more and more difficult, and [illegible] the lips and cheeks become livid, and finally the skin becomes cooler and less dry; the Delirium ceases, the Patient becomes more sensible of surrounding objects, the fever subsides, and the Patient has some inclination for food, [illegible] & finally taking place. In some cases we have a peculiar termination

with worms, the second of constipation is as variable. The average duration of cases may be stated from 21 to 28 days. Diarrhœa is almost an uniform symptom, so much so, that it may be considered among the diagnostic symptoms; but it may be absent. But when constipation exists the bowels are more readily acted on by cathartic medicines than either diarrhœa or tenesmus. The diarrhœa sometimes precedes the constipation, but more frequently occurs during the last. Stools often attain a hundred in number during the day and generally determination of blood and apparent health exist in consistence. This is one of the fatal results of the disease. In other cases the discharges are almost always attended, but in this disease they are not as a general thing exist,

in the advanced stages. The Pain is
dependent upon the Inflammation
-mation of the Intestinal mucous
membrane, & is accompanied with all
with pains in the Abdomen, which
are very troublesome. Tenesmus
is another important Symptom
Entire Blood. Occurring in advan-
-ced stage of the Dis. at first it is not very obvious
requiring persons to ~~[illegible]~~ detect
it. It increases as the disease adv-
-ances, and soon becomes obvious to
the eye. In some cases the Vomiting
is very great intervening with regu-
-lation by pressure upon the Diaphra-
-gm. This morbid Condition is confined
to the Colon; the small Intestines
being but little affected. The Rose
-Colored Stool is a very Characteristic
of this disease. It consists
of red specks, about the size of pen

Pad, or rather in dermal blade
they sometimes get larger, by disappear
upon pressure but return when the
pressure is removed, generally they
their first appearance point on 6th
day. In the 3rd week, a second crop
from the abdomen, then extending
to the Breast, Neck, and Extremities.
These number varies, from 5 to 50
Very numbers. They appear in several
successive crops, each lasting 2 or 3 days
then gradually fading, and the whole
period of the ~~disease~~ eruption varies, from one
to fifteen days. These spots may be
confounded with Petechiae, which also
occurs in the disease, but is not pustular
to it. They are distinguished by
their more livid colour, by their
projecting above the surface, and
by not disappearing upon pressure.
They are more common in Typhus
than in Typhoid Fever.

Another eruption is sudamina, or little vesicles, about the size of a pin's head, but sometimes larger, and more or less numerous, and have sometimes the regular pearly appearance of the can be seen, the skin feel like the touch. The eruption may be on the neck and upper part of the chest, the back, and lower part of the body, and all of these at the same time. The mouth also about the fourth day. Other characteristics of this disease, as the occurrence of measles in other cases. Cough is similar to that of measles. The cough is either dry, or attended with a slight mucous expectoration, with little or no soreness, or sense of oppression in the chest, the dry, sonorous, and sibilant rales, they are of an important diagnostic sign. The head more affected than the chest,

and are much greater in [illegible] of the amount of discharge, than in ordinary catarrhal affections. They are hard, not always [illegible]. Hemorrhage almost always attends this disease. In the last stage, it often stops from the tubes, in some cases, while in others demanding the interference of medicine. Distension from the bowels is here important, but at the same time a bad sign, and ominous of the exhaustion it induces. Diarrhoea cannot be allowed, and the stools should always be carefully watched and examined. In some cases the blood is red and bright, but in some cases it is black. Bleeding may occur in any other hemorrhagic form. Nausea sometimes occurs, headache, pains in the shoulders and in the loins, & extremities.

The eye and pupil are dilated to
touch, to light. Delirium
often appears at the same
not until the second day, and
in general it is mild, indicating
a fever in the brain rather than
irritation. In some instances, the
delirium is violent and from
furious, requiring force to retain the
patient. In the latter cases, the
disease, the delirium becomes low
and muttering; the patient lying
with his eyes half open, utterly
in a low tone, foreign to his
A tendency to sloughing of the skin
is more often observed than
in any other form of the
disease, more particularly when
the bowels have been disturbed, or
the secretions vitiated, and
when it is subject to pressure and
friction, as from lying

Contagion of the Bad in conjunction with the irremissible, or remote cause of the disease, has not been tried in any instance, but the patient being chilled, does not thus resist the cold, it will produce a deep redness, which is followed by a violent chill, accompanied by a burning inflammation in an unusual degree is produced, The pulse fullness Circulation, and diminished vitality of the surface, and the remote causes of the disease, In some cases of this fever will be symptoms and premonitory, Again in others it has no premonitory symptoms, In some cases the have Diarrhoea, loose stools, and Tremblings, in some cases there is appearance of active disease, Bronchitis, and Pneumonia, hoarseness

There is also great disturbance of the cerebral functions.

Pathological Changes.

These are changes which are always found after death, the most constant changes are found in the cortex of the brain, in the Pons, thence to the Medulla, occurring most frequent in the lower portion of the Pons, in the ~~[illegible]~~ anterior part of the medulla they are separated some distance from each other, but in the worst cases they are almost united. They may be seen at the birth of the disease and found broken at all stages, after the first day. In some cases, the old ones are thick and, in others softened, not always found in a stage of ulceration, but more or less diseased. The number varies, from one to thirty, average about 12 to 15. Those patches frequent the

The Cecal valve, is generally diseased, sometimes, only the Vermiform Ca. is distended, sometimes it. Intussusception, is more often occurring Cases than in Adults, compared to those Children. Ulcers of the Ileum are of a hard consistence, such solid, occurring in those cases which have been severe; both are not uncommonly found; sometimes the Ileum is partly Cicatrized, showing that recovery has taken place after Ulceration. The Mesenteric Glands are more only diseased, and upon opening, will find a few drops of pus. The Glands are more affected in severe and protracted Cases, than in milder Cases, the ordinary size of the Mesenteric Glands, are the size of a grain of Corn. Changes which are not Essential. first the Solitary Glands, or mucous follicles of the Ileum, frequently diminished,

though erroneous, the Glands of Brunner. The glands, so named, are situated in the Duodenum, and usually affected in the same manner as the Glands of Peyer. These diseased follicles, are scattered, in larger or smaller numbers, over the whole circumference of the lower portion of the Ileum, and are sometimes found also in the Colon. The Mucous Membrane between the Follicles, are now only diseased. Other changes, are found in the Liver, Spleen, Lungs, Brain, Bowels, Pancreas, Cœlenagus &c. Ulceration of the Mucous Membrane of the Stomach, may be found, but not uniform. We are not to infer, if there is no symptoms of Inflammation of the Stomach, that it is not diseased. Ulceration of the Mucous Membrane of the

large Intestines occurs in about one third, of the cases. The Enlargement depends upon Congestion rather on Inflammation. The Colour is generally changed. Sometimes it is Bronzed. The changes made upon the Blood, in Typhoid Fever is the opposite of that of Inflammation. Ulcerations of the Palate, may occur in this fever but evidently different, from that of Typhoid Fever.

Nothing is known in regard to the essential nature of the disease. Its circumstances of its production are very diversified, in regard to its essential nature. The age of the patient, is the most frequent cause. It most generally occurs, in middle age but scarcely occurs in childhood, or very old age. Among children, it most frequently occurs from the age of 9 to 14. but the most frequent is

from the age of 18 to 25. Tendency of wid-
-ence, is supposed to be one of the prin-
-cipal causes. The disease is supposed
to be contagious by some, and by
others, it is not contagious under
circumstances. The former opinion
is entertained by Prof. C. Smith,
the latter by Prof. E. O. Shaw.
Hygiene precautions. be room should
be well ventilated, and the attendants
should frequently use the fumigation
Autumn, is supposed to be
more favourable to the disease than
other seasons. The disease
occurs most frequently among those
who are most exposed to cold.
The disease may occur in a patient
more than once, it is to be expe-
-cted to occur in those most of

Nature

The essential nature of the disease
is supposed to be an Septicæmia

Disease, produced with us and in-
-flammation. The disease has been sup-
-posed to be a mere Gastro-Enteritis
but Inflammation of the Stomach,
often wanting, and the cause of the
disease is not discovered in the
ordinary Mucous Enteritis. The
relation, have a disease of the
two discovery by the state of Epi-
Glands. It is dangerous when
in large quantity in the beginning
to assume a more inflammatory
to be in the English Epidemic
Owing to the general weakness of Debility
incident to the long continuance of
the disease and to excessive to the
deformation of the Blood, arising
from disease of the Circulating glands
which retain the Circu-
-lation. Many of the Patients have
Fever, but the Mesenteric
Glands

Meningitis

In several of the symptoms are present and at the end of several days; you may see that the disease is Typhoid. Meningitis, Inflammation of the brain, a dull headache, fever, may be mild. Cerebro, as their symptoms are almost similar. The most common form is Typhous, distinguished by the Nervous, found after Death. The diagnosis is difficult in the first few days. It is most characteristic symptom of the disease, are the frequently strangled convulsions mode of attack. The Commencement the beginning is soon attended, the dull or heavy depression of countenance, the drowsy hue of the patient, the tendency to delirium, to cough and sometimes diarrhea and after the 5th or 6th day, the

dryness of the tongue, and the general diminution of the functions of the Secretions, the Tense Colonic Eruption, the Swelling of the Hypogastric Abdomen, the Lumbago, the stupor or delirium, &c. The duration of the disease, being generally but a few days, is also an important diagnostic character. It has been mistaken to be confounded with the milder or Bilious Fever. The latter, however, may be distinguished by its more regular and decided Remissions, by the bilious vomiting, and bulkiness of the Skin, which generally attend it, by its shorter duration, and by its tendency to assume the Intermittent form, and by the absence of most of the prominent Symptoms of the severe Fever, as Diarrhœa, Epistaxis, dingy Complexion, Stupor, Delirium, &c.

and rose colored spots. In Typhus Fever, the stomach is more frequently inflamed, and the Mucous Membrane thicker than in the Enteric. The Diarrhœa is less discussed, and there is a total absence of disease in the Glands of Peyer, and of the Mesenteric Glands, characteristic of the latter Complaint. Sometimes, it is difficult to diagnose, between the two diseases, especially, when the Typhus assumes the protracted Typhoid form. Inflammation of the Membranes of the Brain, sometimes, bears a close resemblance to Enteric Fever, but the peculiar symptoms of the latter disease, will distinguish the two.

Prognosis

The disease should not be considered favourable; in some cases the Worst favourable, may come patients, Obnoxious Malignant Cases,

should not be discovered, that at
favorable periods, the i[illegible] M.D.,
Mary Ann [illegible] did not [illegible]
Dr. [illegible] was not [illegible] with the
Spirit of Delirium tremens, and the
Symptoms. But [illegible] to
the unfavorable [illegible]
-panies, and the Operator [illegible]
-nance. The [illegible] not
depend on [illegible] and [illegible]
-cumstances, but no case should be
looked upon as absolutely desperate,
the most desperate state is that pro-
-duced in [illegible] by [illegible], the
case however [illegible] it may [illegible] be
looked upon as absolutely free
from danger, all cases are liable to
[illegible], [illegible] minutes. Among
the most unfavourable symptoms,
are slow and [illegible] Delirium, a
notion on the part of the patient that
nothing is the matter with him,

[illegible] Constitutional [illegible] [illegible]
congestive [illegible] [illegible] [illegible]
Vomiting [illegible] [illegible] [illegible]
abundant Diarrhea, hemorrhage
from the Bowels, involuntary
discharges, great [illegible] [illegible]
Extreme frequent [illegible] [illegible]
pulse, according to Bouillaud,
coldness, and clamminess of the
Skin, Collapse, sweats, and the
great Abdominal distension, yet,
with any one of these symptoms
the patient may recover. The
favorable symptoms are, the op-
posite of these. If in young the
patient, and he will this fa-
vorable state of [illegible] the more
favorable is his prognosis

Treatment

Prompt, and Energetic treatment
in this disease is indispensible, as the

disease at length run a rapid mortal course, The disease cannot be suddenly cured. The Indications to be aimed at in the treatment of this disease, are, 1st Remove all difficulties that may cover and the patient.
2nd Remove a Congested Irritation.
3rd Upon undue excitement to be diminish. 4th Upon Weakness to be Corrected, and Stimulant should be given.
5th The worm should be well purgated, and all existing internal Irritants removed by mild and slight Aperients — Calomel grs iv combined with pulv of Rhei. When Diarrhea ensues, Opium Vinum Dj Combined with Tinct Opii gtt XX. Drastic Cathartics, should never be given in any case of fever. The Bowels may be Emptied by Enemas of Aqua Calcis ℥ij & one bulls of Salt with 1 & more Molasses. It will be with advantage

of great service, when there is much
nausea — the 3rd Indication is fulfilled
by bloodletting, Diaphoretics, etc. In an
early stage, when the Skin is hot, the
pulse full, bloodletting is requisite;
although it may be dispensed with,
if taken at all, it should be taken
only in small quantities. When
there is likely to be Inflammation
set up in any important organ —
local bloodletting, by Cupping and
leeches, should be Employed — Where
there is Evidence of Congestion blood
should be taken from the immed-
-iate Neighbourhood of the Congestion
by Cupping or leeches. Cold ablutions
should be resorted to, Especially
Ice, both Externally & Internally.
also by sponging the Surface with
Water and Vinegar, or Water and
Spirits, Refrigerant & Diaphoretics,
May be Resorted to, such as

Citrate of Potash, gr. xx, to a wineglass of Water. If there is much Excitement, Tart. Emetic should be combined. A lump of Sweet Spirits of Nitre, Demulcent with Barley Water. But where there is Diarrhœa, no Acid should be employed. Mercury is said by some to be a good Antiphlogistic, but not unless Excitement is properly induced. Blue Mass, gr. x, may be given, every 4 or 6 hours with one of Cretæ Composita. Stimulants, and Tonics, should be employed as soon as there is evidence of Weakness of the Pulse, Coolness of the Extremities, and prostration of the System. The diet should be improved after 2 or 3 days. Wine Whey, Brandy, or Brandy & Water, Carbonate of Ammonia, Prune Wine, Muriatic Acid &c. Oil of Turpentine is of great importance. Where there is a weak and feeble pulse, dry Tongue,

and Tympanitic state of the Bowels, and more Especially the mucous lining clean off quickly. Some of Voltin should be administered, with from gtt. V to XXX every Bowel movement. The Tincture agents to most suitable are, sulphate of atropine or Belladonna injections every 2 hours, in the Commencement, repeating the close gradually, as the Symptoms may require. Inflammation should be Counteracted by general and local Extraction of Blood. At a later period Sinapisms may be Employed. Whenever there is symptoms of Inflammation in the Brain, the hair should be Shaved, and Cold applied. There are Special Symptoms that Require treatment. 1st. the Constipation of the Intestines, may close a Visium, and the Irritation of position so that the Bowels may heal

prone first intention. Opiums of the Diaphragm, Sinapisms & Cruels also given in syrup of Tolu, Camelmain Musk. Whenever the surface becomes Cold; Stimulating applications must be resorted to, Sinapisms, Artificial heat, Turpentine, hot Brandy, hot Bricks to the surface &c. but in the last mentioned remedy, particular attention should be given as much mischief is frequently done, by neglecting them. The Patient should be prevented from lying to long in one position. if there should be any sores, they should be Examined twice or three times during the day. Applications of Brandy, the lead poultice &c, should be resorted to. Whenever there is much distension or uneasiness originating from the Bladder; the Catheter should be introduced. in more advanced cases you

[illegible]

quinine, may be given in Typhoid fever, when there exists no local Inflammation, and no doubt, with happy results. dose, grs. 15 to 20 every 3 hours

J. Wyandott Brock
of Ohio

An
Inaugural Dissertation
on
Dysentery

Submitted to the Examination
of the
Provost Regents and Faculty of Physic
of the
University of Maryland
for the
Degree of Doctor of Medicine.
By

Duncan Sinclair

of
Robeson County
North Carolina

To

Samuel Chew, M. D.

Professor of the
Principles and Practice of Medicine
in the
University of Maryland

as a
Mark of Respect
for his
High Attainments as a Teacher
and for the
Social and Moral Qualities
which
Distinguish him
as a
Gentleman

This Essay
Is Respectfully Inscribed

Dysentery.

Great efforts have been made, and are now making, to advance the science of medicine. And the student of the present day in his search after truth, has greater advantages afforded him than those who have preceded him. But, although the science and the art have undergone great improvements, our views enlarged, and our knowledge increased; yet much remains to be accomplished.

The life of every medical man is, or, should ever be one of investigation and study. He should endeavor to divest himself of all prejudices and prepossessions, keeping his mind unshackled by preconceived opinions, in order that he may be enabled to give due weight to every theory and fact, and also, every modifying circumstance in relation to the important subjects that may be presented for his consideration. The prejudiced mind anxious for the establishment of some particular theory resists

facts to its aid, selects such only as support some preconceived theory, and discards those which might modify or correct it. To students of medicine this is a matter of the highest importance, and constantly requires their serious attention. This error chargeable to the junior class of the medical profession and under the influence of which it is to be feared too many grow old and incorrigible, is a too confident reliance on the powers of medicine. The favorite system formulgated by their instructors and adopted in their early studies should be well examined as they advance in the experience of maturer years; yet it is found that this is sometimes neglected, and the principles imbibed during beginning are with little modification applied to every form of disease, and whilst the unfortunate patients fall victims to this error, the medical sect is charged to the instruction of the disease without ever suspecting the defects in the principles by which it is treated. There are, doubtless, cases in which the constitution now is withstood to unitive attack of fact the

diseases and the physician. Under treatment the exclusive system, in medicine, has been the prolific source of many errors, and in the whole catalogue of diseases there, probably, is no one in which exclusive system and empirical treatment have been more extensively employed, and have been productive of more fatal results, than that which has been selected, as the basis of this dissertation.

Dysentery has been variously defined. It will be sufficiently explicit for our present purpose to define it, as consisting essentially, in inflammation of the mucous membrane of the large intestine. It is characterized, by frequent mucus or bloody evacuations, tormina, straining at stool and tenesmus. The writer proposes to treat of it under three distinct heads viz. the acute, bilious, and malignant, or adynamic.

Acute Dysentery. — An attack of the disease is usually preceded by lassitude, loss of appetite, an uneasy sensation in the abdominal region, costiveness or diarrhea

clinical excitement and heat of the skin. There is however, great diversity in the premonitory symptoms and also, in the types and grades of the disease.

Fever is always present, except in very mild cases, and in nearly every instance, especially in warm latitudes there is hepatic disorder. The urine is scanty, the tongue moist and furred and the skin warm and dry. After the first few reactions which are flow more or less febrile the stools become more frequent and consist of transparent or whitish mucus, sometimes mixed with blood, and frequently composed almost entirely of pure blood, and at other times of an acrid watery humor with a peculiar fetid odor. In the progress of the disease, a little vitiated bile and shreds of false membranes and small masses of coagulated matter, intermingled, occasionally, with hardened lumps of fecal formed scybala, are avoided, though these latter are less frequent than was once supposed.

The discharges are seldom less than once in two hours and in many cases are much more frequent. The motions of the bowels are preceded by severe griping pains accompanied by straining, which is apt to force out prolapsus ani especially in children, and are succeeded by tenesmus. Venereal excitations are very followed by considerable depression. There is more or less tenderness in the abdominal region and the locality, as well as, the degree of pain for desired or frequent serves as a useful guide in determining as to the seat of the inflammation, in the colon and rectum. Sympathetic irritation of the bladder and urethra, and in females of the vagina, occasionally occurs producing frequent and difficult micturition, tenesmus and a mucous discharge when there is considerable disorder of the hepatic function, are not infrequent. These are the most prominent symptoms usually observed as a cause

of simple acute dysentery. Mild cases unattended with fever require but little treatment and will slough off spontaneously, in a few days. In much the greater number of the cases of simple dysentery, the disease under proper treatment reaches its crisis in about a week, a favorable change takes place and the patient recovers. In the case of women, great danger is ordinarily to be apprehended from a continuance of the disease beyond ten days, for should the symptoms not yield in that time, they are liable to become greatly aggravated, the tenesmus and tormina increase, the abdomen becomes swollen and more tender; the discharges more frequent; the pulse weaker and more rapid; the tongue assumes a dry and brownish appearance; or throws off its fur and becomes red and smooth, and sometimes cracked; the patient is exhausted and restless; the stools more copious and offensive, and

instead of consisting chiefly of mucus or blood, is mixed with purulent matter, sanies or bilious secretions from the upper bowels, and are nothing more than a kind of bloody serum. Such cases are liable to assume the chronic form.

Occasionally, indeed, when the attack is unusually severe, the symptoms of extreme depression are evident from the outset. The nervous system resembles in the outset of the first stage. The pulse is small, frequent and feeble; the skin pale and clammy; the features indicative of extreme prostration of the powers of life; the tongue and tongue exceedingly violent; the discharges almost incessant; with tympanites and great tenderness upon pressure. In such a case coma may supervene, and in a few days death closes the scene.

There is great diversity in the grade of severity which characterizes different cases of dysentery, and this diversity

is dependent on the activity of the cause and the susceptibility of the patient. But it is important to recollect that dysentery is very often associated at the outset with disease in some other organ, or organs, or, with some morbid state of the general system, which in various degrees complicates the symptoms and increases the danger. In severe epidemics especially, it must be borne in mind, that in a number of the cases, the morbid phenomena will differ in intensity from what the symptoms would seem to indicate. There will often be a severe development of nervous symptoms and after death no pathological lesions will be found in the alimentary canal to account for their severity. In these cases the disease cannot be, merely, of the intestines, but must be in part nervous, depending on some morbific cause, acting on the general system.

Bilious Dysentery.— In a great majority of the cases of dysentery, the biliary secretion is diminished. In the simple form of the disease this may often be considered as nothing more than the result of the activity produced, in like manner, as the dry skin and scanty urine. But when the disease occurs in warm latitudes and in malarious districts, the liver is often either primarily or secondarily involved, producing a suspension of its secreting action; the direct tendency of which is to increase and perpetuate the disease in the bowels. Such cases are properly termed bilious dysentery.

This form is characterized by a feeling of oppression in the epigastric region, generally nausea and retching, yellowness in a greater or less degree of the tongue, conjunctiva, skin and urine, a higher grade of fever, a greater tendency to delirium and stupor, and other absences morbid increase

or, depraved condition of the biliary secretion.

Malignant or Adynamic Dysentery. — This is another form of the disease which occurs in individuals previously exposed to the influence of various depressing causes, such as wet and cold, unwholesome or insufficient food, anxiety, fatigue, confinement in prisons, or crowded and illventilated apartments, and wretchedness of every kind.

The same form of the disease is, doubtless, sometimes produced epidemically, by the influence of a peculiar contamination, or depravation of the atmosphere. Under these circumstances along with the symptoms of ordinary dysentery in an aggravated degree, are those of malignant, or septic disease, such as nausea and vomiting; frequent feeble and irregular pulse, a foul dark dry tongue, with sordes about the teeth, a dusky skin, sometimes hot, sometimes

cold, dark livid spots, gangrenous excoriations; reddish, brown or black stools more copious than in the simple disease and usually fetid or hemorrhagic consisting often of altered coagulated blood. Great prostration of strength exists even from the beginning, together with the various evidences of nervous disorder, such as anxiety, depression of spirits, headache, low delirium, subsultus tendinum and stupor, all these symptoms are not present in every case, but they are generally sufficiently numerous to distinguish the severity of the disease. When the causes producing this form are united with those which produce the bilious variety there is frequently presented a combination of symptoms unprecedented in malignancy by those of any other disease. It may be ranked as one of the most formidable, intractable, and fatal diseases with which the physician has to contend, and

the protean nature of which can be fully comprehended only by those who have carefully observed it in all its malignant variations.

Among the diseases with which dysentery is often complicated, may be enumerated, intermittent, remittent and typhous fevers. In these cases the treatment must be modified in accordance with the several complications.

Prognosis.— Ordinary sporadic cases of dysentery in temperate climates are seldom fatal. But when it prevails epidemically, or, among great masses, in armies and prisons, or in miasmatic districts it often proves exceedingly fatal.

When a case is about to terminate favorably, the pains gradually subside, the tenesmus diminishes, the stools becoming more copious and less frequent, assuming a fecal or bilious character and finally, slight diarrhea remains for a time, and then ceases. But, on the contrary, a sudden

cipation of the lorrina and Tenesmus, Tympanites, coldness of the extremities, a cool clammy skin, livid hue about the nails, irregular feeble and irregular pulse, in the later stages, delirium subsultus tendinum and stupor are symptoms of the most unfavorable kind and together with cerebral a speedy and fatal termination. The danger is proportionate to the length of time the disease continues without improvement and, also, to the extent of the inflammation in the colon. If the disease passed beyond the fourteenth day, or tendency is found upon perusing along the whole track of the colon the prognosis is unfavorable. Death may result from failure in the vital powers, produced by the intensity of the irritation, from general debility, from gangrene, or, from the continued depressing effects of the inflammation and the discharge.

Pathological Anatomy.— Dysentery is inflammation of the large intestines which is sufficiently indicated by the position of the pain as well as the post mortem appearances. The disease usually commences in the lower end of the colon and occasionally attacks within a short distance of the anus. Examination after death discovers ulceration in various degrees, thickening of the mucous and other coats, contraction of the calibre or sloughing of the mucous membrane of the bowels. The ulceration generally begins in the mucous follicles and then assumes a regularly rounded form; but the ulcers extending run together and finally join. It is the ulcerative ulceration of the mucous coat which is found in most bad cases of dysentery. The accidental diseases afford a satisfactory reason for the length of time which the intestine requires, in severe cases, to recover its normal condition. It is apt to remain

more or less, diseased notwithstanding the diminution of the symptoms. When the ulceration has been extensive, the contraction resulting from it is, doubtless, an great obstacle to perfect recovery to the passage of fecal matter, by the distension it produces, rendering it difficult to the healed surfaces, towards the intestine, with the again a healthy state after severe ulceration and sloughing. In the acute form of the disease the most extended ulcers will heal, leaving a comparatively smooth cicatrix. The depth of the ulcer is of more serious import than its extent. Perforation of the intestine rarely occurs in dysentery.

Causes. — The disease prevails mostly in the summer and fall, still it occurs during the cold season of the year. One of the most prolific predisposing causes is the continued influence of heat, which by increasing the irritability of the mucous membrane of the stomach,

canal, disordering the functions of the liver and weaning the surface of the body, rendering it more susceptible to the action of cold. Some of the most common exciting causes are sudden changes of temperature, or cold combined with moisture. Persons exposed to heat during the day and the cool damp air at night, are peculiarly liable to attacks of ague. The perspiration is thus checked, the hepatic secretion arrested, producing congestion of the portal circle, and consequently of the mucous membrane of the bowels. Among other exciting causes may be mentioned, unwholesome and indigestible food of all kinds, particularly unripe fruit or ripe fruit in large quantities, acid and improperly fermented liquors, putrid water, drastic purges, worms, and feculent accumulations in the bowels. To these may be added the exhalations arising from putrid animal substances and vegetable miasmata. Ague is frequently epidemic. Sometimes

prevailing over a large extent of country but generally confined within a small compass. Miasmatic districts are very apt to be visited by the disease epidemically but in many instances it cannot be traced to any local cause whatever.

It is now generally admitted that typhus in its ordinary form is not contagious. When in confined situations, where many patients having the disease are crowded together without due attention to cleanliness, or ventillation, it may be communicated to others who may be thus exposed. No person is exempt from the disease. Both sexes and all ages are attacked indiscriminately. It is more common in hot than temperate climates and frequently commits great ravages in armies and garrisons.

The Treatment. – Various kinds of treatment are serviceable in different cases and, also, in different stages of dysentery, and it is impossible to lay down any particular plan for the management of the disease, as the practice must be modified according to its peculiar character at the time.

In very mild cases little treatment is required, nature unaided, often being adequate to a cure. And in the ordinary cases from the treatment is sufficiently simple. The usual antiphlogistic means are necessary, with laxatives and narcotics calculated to remove the morbid secretions and sling the irritability of the inflamed mucous membrane. Purgatives have been extensively employed, and many articles of the class are used, the best of which, perhaps, is castor oil which purges and so effectually to carry off the morbid secretions without producing much irritation. Laudanum may be combined with the

ive to prevent it from acting too hastily and, also, to lessen the irritability of the bowels. The diagnosis mixture is a very good formula for this purpose. Rhubarb is also an useful purgative in many cases and when the active symptoms have abated, it may be advantageously combined with aromatics.

In the acute form of the disease, when the pulse is strong and rapid, venesection is sometimes required, but this remedy should be used cautiously, and is often contraindicated when the disease occurs epidemically with a malignant tendency.

Cups or leeches to the abdomen will frequently be found serviceable, especially when indurations can be felt in the abdomen attended with pain and a marked sensibility. After these inflammatory symptoms have been removed, blisters are often employed with much benefit.

Warm fomentations, emollient enemas, and injections to the abdomen

are generally of great service, if properly timed. A very good application of this kind is the common mustard poultice, spread thinly, with a little mustard sprinkled over its surface.

But these measures however important and useful, can not alone be relied on for the cure of the disease; we must restore the secretions to their healthy condition. And for this purpose calomel and opium, either alone, or in combination with other remedies are usually employed. The employment of mercury in dysentery has led to some discussion, and evidently some discrepancy of opinion exists as to its utility. The amount of evidence is against its indiscriminate use. Nevertheless in certain forms of the disease, especially, when complicated with disorder of the liver, it is the most efficient remedy. It is rarely however necessary to employ mercury as a purgative in dysentery. It is used in divided doses

for a few days to produce its specific anti-phlogistic effects, and should be immediately suspended, should symptoms of ptyalism be perceived. Mercury is best adapted to the inflammatory form of the disease, and is frequently useless and, even injurious, in the malignant and sloughing cases. A concise and very effectual formula for its administration is one grain each, of blue mass, ipecacuanha, and extract of gentian, given in the form of pill every two, or three hours. Should there be much irritation of the stomach or bowels, a small portion of hyoscyamus or opium may be added. It is necessary to open the bowels occasionally, with mild laxatives in order to remove morbid secretions from the alimentary canal, but cathartic purgation must be studiously avoided.

Opium is a remedy of great value in dysentery, but it may be productive of evil. It eases the local pain and the

general irritability, while it tends to lock up the bowels and prevent the discharge of the morbid secretions and feces, may be injurious. To obviate this effect it is usually combined with some laxative remedy, such as castor oil, ipecacuanha, or some of the preparations of mercury. It should never be used during the height of the inflammation, but is often useful in the commencement and is peculiarly applicable in the advanced stage, when the actual treatment has been reduced, or the disease has assumed the subacute or chronic form. In such cases the patient may be kept under the influence of the drug for some time, with beneficial results.

Ipecacuanha has been extensively used, and is, doubtless, a very valuable remedy. It is often combined with either mercury or opium or both. It should be administered in doses sufficiently large to produce nausea, and operate on bowels or kidneys. When the remedy is pushed

lar remedy to produce nausea and vomiting, the symptoms will in a great majority of cases become greatly alleviated. In the simple form of the disease ipecacuanha alone will often accomplish a cure.

Tartar of lead has been much lauded, and has been employed in all stages, but, until sufficient depletion has preceded it is of doubtful utility. It is best adapted to chronic cases, or those of the acute attended with unusual hemorrhage. It is one of the most successful that can be employed in hemorrhage of typhoid or malignant cases. The dose is from one to three grains and may be given every two or three hours, combined with opium.

Sulphate of copper and acetate of zinc are also applicable in the advanced stages, when the system has suffered much. These, likewise, should be combined with opium and exhibited in the ordinary doses every two or three hours.

Nitrate of silver has been attended with the happiest results in the latter stages, administered both by the mouth and in the form of enemata.

The acids have occasionally been used with success in the advanced stages and in chronic cases to which they are restricted.

Nux vomica, naptha, charcoal, and a great many other agents have been employed with some success by different practitioners; but these are seldom used except in peculiar cases or as a last resort and therefore, any extended notice of them is deemed unnecessary.

The oil of turpentine and cupaiba, however, deserve, perhaps, a greater degree of attention in the treatment of typhus than they have as yet received. In adynamic or typhoid cases, especially when attended with ulceration, the oil of turpentine is a very effectual remedy, and as a general rule is less offensive

to the stomach than the copaiba. The oil of Turpentine may be administered in doses varying from five to twenty drops, repeated every two or three hours, given in emulsion, and in cases of great debility and nervous disturbance, camphor water may very properly be added to each dose, and, also, for the relief of flatulence, cinnamon or peppermint water. Should any unpleasant symptom follow its exhibition it may be suspended for a time, and then resumed. In very many cases it may be continued for two or three days and even longer without causing any ~~[illegible]~~ for its suspension, and, indeed, in many cases it will be necessary to persevere in its use for this length of time ~~[illegible]~~ in order to obtain its full therapeutic effects. When decided improvement becomes evident, the time between the doses may be prolonged and the dose gradually diminished until

recovery is fully established, the remedy should not be discontinued either prematurely, or abruptly.

Emollient enemata are highly recommended and undoubtedly often afford great relief. When found to yield comfort to the patient they may be repeated once a day or more frequently. The most useful of this class are solutions of starch, infusions of flaxseed, slippery elm &c.

Injections of acetate of lead and sulphate of zinc when the disease is confined to the rectum and lower colon often afford far most decided relief. From five to eight grains of either of them may be given in four or five fluid ounces of water, or solution of starch, to which may be added twenty or thirty drops of laudanum, and repeated from one to three times daily. Nitrate of silver has also been used very successfully

in the same mode. In the same manner the vegetable astringents, kino, catechu, and tannic acid are often highly serviceable.

Opiate suppositories are sometimes employed for the purpose of allaying local distress.

When the Tenesmus is very severe, an injection of cold water will generally afford much relief.

The preceding is the course of treatment usually adopted in the ordinary form of dysentery.

The bilious variety requires a more energetic employment of mercurial remedies.

In the adynamic or Typhoid form, the treatment must be modified according to the several indications. In this variety stimulants and tonics are necessary to support the strength and are often required at an early stage

Great caution is necessary in regard to diet. In febrile cases and in the acute form, nor but the lightest kinds are admissible, such as mucilaginous or farinaceous kinds, solutions of gum arabic and arrowroot, thin gruels, infusions of slippery elm, decoctions of barley rice and the like. In the latter stage mild gelatins and broths are proper. Relapses are very apt to follow improprietes of the stomach and in convalescence great care should be observed in diet until convalescence is fully established.

Chronic Dysentery. This may occur as an original disease but it is generally the consequence of an acute attack. In regard to the treatment we must rely principally upon the related diet. In some cases farinaceous articles will succeed but with others will require animal food. The remedies of most efficiency are opium ipecacuanha and mercury in small

doses. The mineral acids are appropriate in this form of the disease. Nitric acid has been recommended, and exhibited in the formula of Hope's mixture. In all cases that mode of life should be adopted which is most likely to improve the general health.

From the preceding remarks it is evident that the treatment of lumbago must vary according to the different forms of the disease and in various epidemics. The appropriate remedies will, in general, be suggested by the peculiar symptoms of each case, although in some of the most obstinate cases success will depend on attention to some apparently unimportant particulars such as the condition of the skin, or some slight change in the diet or mode of life of the patient.

In conclusion, the writer is conscious that this essay, on dysentery, is, in many respects defective, and is not commensurate with the importance of the subject. But, trusting that fair allowance will be made for deficiencies, by those, by whom, its merits [illegible] be scrutinized, it is with [illegible] it is now respectfully submitted.

The End.

An

Inaugural Dissertation

On

Scarlatina,

Submitted to the Examination

of the

Provost, Trustees,

and

Faculty of Physic,

of the

University of Maryland

for the

Degree of Doctor of Medicine.

By

S. W. Gunby,

of

Scotland & Maryland.

To

Jno. G. Chew M.D.

Professor of the Principles and

Practice of Medicine

in the

University of Maryland,

and

Dr. Jas. Neil Merrill,

with the

Greatest respect for their Professional

attainments and Gratitude

for their

Kindness.

Scarlatina. — The term, Scarlatina, is now restricted to designate a disease of a contagious nature, the general characteristics, of which consist in fever, followed about the second day generally with a scarlet efflorescence of the skin; of the mucous membrane of the mouth and fauces, accompanied, in a majority of cases, with inflammation of the throat, and occasionally of the submaxillary glands. The period of the process of desquamation being towards the latter part of the first week.

Scarlatina is divided by medical authors into several varieties, with a view to embrace the prominent characters of the disease, as manifested during the progress of a prevailing epidemic. The varieties, however, into which it has been divided by writers, are nothing more than the same disease, modified by the constitution of the patient, and typar-

of the prevailing epidemic. This disease is generally divided into four varieties, and thus we shall endeavour to treat of it:- 1st Scarlatina Simplex. 2nd Scarlatina Anginosa. 3rd Scarlatina Maligna. 4th Scarlatina Faucium, (of Tweedie).

By Scarlatina Simplex is understood the simple Constitutional disease, the cutaneous eruption appearing in the usual manner, but in which there is no inflammation and swelling of the throat.

In the second variety, (Scarlatina anginosa) there is more febrile excitement, and the mucous membrane of the throat is at the same time inflamed and swollen.

In the third, or malignant form, the symptoms manifest a greater degree of violence; the fever being of an adynamic character, attended with great depression of the vital forces, sometimes accompanied with

gangrenous inflammation of the throat, with considerable tumefaction of the cervical glands. In the fourth variety, (Scarlatina Faucium,) the efflorescence does not appear on the skin, the specific poison being limited to the lining membrane of the mouth and throat.

1. Scarlatina Simplex. – The precursors symptoms of this form, are like those of most other fevers, Chillings, shivering, lassitude, fullness of the head, succeeded by quick pulse, heat and thirst, sometimes nausea and vomiting. These symptoms vary much in degree in different cases; from the slightest disturbance of the constitution, to fever of the greatest intensity. About the second day, according to the opinion of a majority of writers on this disease, the eruption makes its appearance, being in the form of small red spots; appearing first upon the face, neck, and breast,

gradually extending itself over the whole body. On the third day the eruption has reached its acme. On the face, neck, and upper extremities it is in the form of a continuous bright redness; but on the trunk, it is diffused in large irregular patches. The redness is more vivid in the evening than in the morning, and is often more considerable about the loins, flexures of the joints, and nates. The rash, when given to the hand when passed over it, a sensation of roughness, but not of elevation. Sometimes however it is intermingled with miliary vesicles, more especially on the Body. The eruption is visible upon the inside of the mouth, and mucous membrane of the throat which present a scarlet tint. The tongue if clean exhibits the same hue, if furred the papillæ appear through the coating of the fur.

On the fifth day the efflorescence —

begins to decline, the scarlet colour gradually becoming more pale, and in a day or two after, it has altogether disappeared; its departure is attended with a desquamation of the cuticle, which begins on those parts where the eruption first appeared, and proceeds slowly over the entire body. The desquamation from the face, neck, and trunk, is usually in the form of a scurf or scales, while large portions of the cuticle are detached from the hands and feet; occasionally, the cuticle from the hands and feet is separated entire.

2. Scarlatina Anginosa.— In this form, all the previous symptoms are in a greater degree of intensity; the fever is higher, with a quicker pulse, more headache, and delirium is sometimes aggravated; there is oppression of the precordia, retching or vomiting, the soreness of the throat

may be very severe and distressing; with pain and stiffness of the muscles of the jaws, painful deglutition, hoarseness, and the secretions from the mouth and throat will become so viscid as to cause the patient much pain and suffering by his efforts to expel it. Low examination of the throat, will reveal considerable swelling of the tonsils, uvula, and soft palate, and a pleuria redness over their whole surface; and often portions of lymph, of a grayish white appearance are thrown out, which may readily be mistaken for sloughs of the linens membrane; but by cleansing the throat, the mucous membrane will be found entire. When the symptoms have attained their hight there is usually observed much nervous excitement; - in this case, inflammation of the encephalon or other organs may supervene. -

In some cases diarrhoea and constant vomiting, with great tenderness of the abdomen are present, evidencing an inflammatory condition of the alimentary canal, or there may be also fatal inflammation of the respiratory organs. Fatal gangrene of the throat may also supervene. Acrid discharges from the nostrils, and ears, arise, frequently accompanied with inflammation and suppuration of the cervical glands and adjacent cellular tissue. There are, sometimes, great irregularities in the appearance of the efflorescence; it may appear earlier than usual, or it may be retarded, or after its appearance, it may recede, or become faint. About the fifth or sixth day, if the patient is to recover, or if the disease follows its ordinary course, the rash begins to grow pale, following the same order in its decline, which it had previously observed, in its appearance.

The fever and inflammatory symptoms abate with the fading of the eruption, though sometimes, the sore throat and some degree of fever will persist for a week or more after the eruption has entirely disappeared.

3. Scarlatina Maligna. — The symptoms of this form of Scarlatina at its commencement, differ but little from the preceding, yet at an early period, its formidable nature becomes apparent. Thus the fever assumes a typhoid form; the pulse becomes rapid and irregular; the heat of the surface is unequal, with restlessness, and low muttering delirium. There is great dejection of spirits, prostration of strength, and heaviness, about the breast. The countenance is pale, and sunken; there is a dull redness of the eyes, with a dark flush on the

cheeks, the tongue is loaded with a dry brown fur; or it is red, dry, and glazed; the teeth and lips, are covered with sordes; and the breath is very offensive; the throat has a dusky hue, and is much swollen; the velum pendulum palati, uvula, and tonsils, are covered with dark incrustations; in some cases there is a sloughing of the parts from gangrenous inflammation; the discharge from the nostrils is acrid, excoriating the upper lip, the secretions from the fauces are so viscid as to impede respiration, producing a rattling noise. The pharynx becomes so involved in the inflammatory process that is going on, which though not swollen, becomes so irritable, that in an attempt to swallow liquids, they are rejected and thrown out through the nostrils. The efflorescence as before stated is very irregular in its appearance, it comes out often

very late, and recedes in a short time; reappears again and vanishes away, pursuing this course several times during the disease. The eruption is generally of a darker hue, and in more irregular patches, than in the other forms. Hemorrhage sometimes occurs from the nostrils, throat, and intestines; petechiæ often appear upon the skin, and the patient will gradually sink. Death occurring at different periods, according to the original strength of the constitution, or the violence of the disease; "this varying from the second, third, or fourth day, to the second or third week."

4. Scarlatina Fauciium. — This fourth form occurs chiefly among adults, but is not altogether confined to them. In fact it is nothing more than Scarlatina confined to the mouth and throat; —

without any rash upon the skin. When Scarlatina prevails epidemically, this variety sometimes occurs simultaneously with the other forms of the disease, in individuals of the same family; and observation has clearly proved, that it is capable of communicating by contagion all the other forms of Scarlet Fever.

Morbid Anatomy. – The anatomical lesions observable in persons who die of Scarlet Fever are various according to the complications, such as inflammation and congestion of various parts, which may have existed during the progress of the malady. In some cases, no morbid appearances can be detected, especially in rapidly fatal ones: generally however we find on the skin the efflorescence pale, or it is of a dark hue, and sometimes livid spots and petechiæ.

In fatal cases of Scarlatina Anginosa, a congestive state of the mouth and fauces is found, these organs present a dark red tinge which sometimes extends to the trachea and Bronchia; also tumefaction of the tonsils and adjacent parts, which are covered with coagulable lymph. The mucous membrane of the whole alimentary canal is occasionally found red and injected; with sometimes effusion into the peritoneal cavity. Though these latter appearances are but rarely found. The blood presents many aspects; thick and watery, dark or red liquid or coagulated. Purulent matter is occasionally found in the joints without any mark of previous inflammation.

Diagnosis.— The only affections with which Scarlatina can be confounded, are Measles and Roseola.—

It may be distinguished from Measles by the premonitory symptoms, by the interval from the accession of fever to the appearance of the eruption, and by the Sequelae. Measles is ushered in by the usual symptoms of catarrh, - Such as Coryza, sneezing, watery eyes and cough, while in Scarlatina it is the throat to which the attention of the patient is first directed. In Measles, the rash is diffused, in irregular portions of crescentic form, and is slightly elevated above the surface, and of a dark colour, somewhat of a raspberry tint. In Measles the rash appears generally, on the fourth day of the fever, whereas in Scarlatina it may be seen on the second day, and is of a vivid red colour, and in broad patches of an intermediate shape. In Measles there is generally a manifest abatement of the fever

when the eruption taking place, whereas in Scarlet Fever, instead of an abatement, there is often an increase of fever.

Roseola is distinguished from Scarlatina by the absence of Angina, by the Mildness of the fever, by the partial and defined rash, and by the short duration of the disease.

Prognosis. — There is no disease in which the result is more uncertain than in Scarlet Fever, and the prognosis is influenced chiefly by the extent and severity of the local inflammations; at the same time we should bear in mind, that in Scarlatina Anginosa particularly there is a natural tendency in the disease to a favourable termination. Even in the mildest cases it sometimes assumes a malignant character and terminates fatally, when there are no manifestations of any-

dangerous symptoms; at other times cases occur, where the result would certainly seem unfavourable and yet the patient will recover. - The Sequelæ in the milder forms, are much more frequent, than in the severer forms, and even when convalescence occurs there is danger always of various secondary affections. In parturient women the disease is generally dangerous, and Dr Watson, says "almost always fatal," Under other circumstances, women are said to bear it better; in men it is prone to end in death.
In the Prognosis, much attention should be paid to the prevailing epidemic, when it is mild a favourable result may be anticipated, when violent and severe, the prognosis is not so favourable, The unfavorable symptoms are great prostration of strength indicated by feeble pulse, cold skin and invol-

untary discharges of urine and feces, continued delirium or coma, extreme jactitation, a livid or purple colour of the rash; and the same appearance in the fauces, interspersed with gangrenous sloughs or ulcers, an extension of the pseudo-membranous exudation in the larynx, with evident symptoms of inflammation of the organs of life. The favorable symptoms are the converse of all this, with a gradual abatement or subsidence of the disease; such as the diminution of the swelling from all parts of the body, with the gradual supervention of the process of desquamation, the pulse becoming slower and less irregular, but abating, refreshing sleep, and a return of appetite.

Sequelæ. — As sequelæ in scarlatina, there are dropsies in the cellular membrane, or in the —

cavities of the body, abscesses in various situations, ophthalmia, suppuration of the glands of the neck; otorrhœa and ozæna. In some epidemics, the disease is prolonged, and its mortality great, by the occurrence of gastro-enteritis and Bronchitis. Sometimes there are purulent deposites in the larger joints, and gangrene of some portions of the body or extremities. Serous inflammation is apt to arise in the pleura, pericardium, peritoneum, and arachnoid membrane of the brain. Diarrhœa is a frequent consequence, and is obstinate and unyielding in many cases.

Causes. — With regard to the cause of Scarlatina there is a great diversity of opinion, and to reconcile these conflicts of opinion the writer feels himself inadequate to the task. — A large

Majority of the profession however is favourable to the view, that it is like the exanthemata in general, a contagious as well as epidemic disease.
Great difference of opinion seems also to exist in the profession, whether, when the disease has once run its course, the constitution was rendered unsusceptible to its presence. This a general rule will apply, but the exceptions are numerous. The period of incubation is various, it may be set down from two, to ten or even twenty days. The period at which the contagion can be communicated from the patient to a healthy individual, is not positively determined. No age is exempt from this disease, But it is certainly in a prominent degree a disease of child-hood and youth.

Treatment of S. Simplex.

This form of Scarlet Fever being of such a mild character, but little treatment is required. The apartment of the patient should be kept cool and well ventilated, cool drinks given freely, and mild laxatives as occasion may require, at the same time watching the patient carefully, fearful that some symptoms may arise in its course that would demand prompt and active treatment. Should heat of the surface be great, sponging it with cold or tepid water affords much comfort to the patient. In strong and plethoric subjects, bloodletting from the arm or leg may be employed, at the same time having a due regard to the type of the prevailing epidemic.

Scarlatina Anginosa.

In this form of Scarlatina, the treatment required should be something more than expectant, for in this variety, we have not only fever of more active type than in the former, but also local inflammations to contend with. Here great discrepancies of opinion exists among the profession upon the propriety of Bloodletting, more especially in reference to the amount of blood to be taken away at one time, and its repetition. In strong plethoric subjects it would seem to be demanded, provided the character of the prevailing epidemic, does not appear to contra-indicate it, with a view to prevent hyperemia of the internal organs. The local abstraction of Blood, by cupping behind the neck, or leeches to the throat, or behind the ears, is sanctioned by almost-

all writers on the disease. Scarification of the tonsils is advised as the best form of local bloodletting; in children there will be great difficulty to accomplish it, in adults it may be easily done.
Gentle Emetics are strongly recommended in this variety of the disease, more particularly at its onset, and in children at all stages of the disease. With regard to purgatives a great diversity of sentiment prevails; But unquestionably their use cannot be intermitted, a purgative dose of Calomel, followed by some mild laxative is generally approved, and a repetition of laxatives as Castor Oil Sulphate of Magnesia &c, will be required to preserve a soluble condition of the bowels, selecting the articles according to the condition of each particular case. If diarrhoea supervenes and proceeds to any-

great extent, it must be arrested. In such a case Laudanum, and castor-oil, will generally be sufficient for this purpose. In addition to these means, the refrigerant plan of treatment as recommended under the head of Scarlatina Simplex, should be pursued. Cold water, or ice, should be freely given. Chlorinated soda, and chlorinated lime have been advised, which are added to the water. The neutral or effervescing mixture, solution of citrate of ammonia, liquor of acetate of ammonia, nitrate or chlorate of potash, alone or combined with Tartarized antimony, according to the circumstances of each particular case. When nervous symptoms arise, sweet spirits of Nitre, or Hoffman's Anodyne, will be found useful adjuncts to the above mentioned refrigerants.

Gargles should be freely used.
Aqua Chlorini, - Soda - Muriatic acid, Sulphuric Acid, Nitrate of Silver, Alum, &c and each have their advocates. If in Children who cannot gargle, moisten the throat should be employed, with a sponge or soft bag.
Sir Watson, speaks very favourable of a solution of Chlorate of Potash, internally administered. - Emollient poultices and rubefacients to the throat should not be overlooked, and inhalations of steam from hot vinegar and water will be beneficial if properly used. Leeches and blisters are advised by some Physicians, to remove tumefaction of the cervical glands, but the time for their employment requires great discrimination.
After the subsidence of the fever, and the disappearance of the

Eruption, great care is required, in order to prevent the sequelae of the disease if possible. A more nutritious diet should be allowed, and if the case seems to demand it, Tonics may be administered, but in their Selection much judgement is required.

Scarlatina Maligna

In the management of this, the malignant form of Scarlet Fever, the practitioner should bear in mind its formidable character, in as much as the fever is almost always of an adynamic form, the symptoms being those of congestive Typhus; It commences with local symptoms very similar to those of Scarlatina Anginosa. But the sudden depression of the vital powers quickly indicates its formidable nature. Bleeding is considered a hazardous

remedy. At the very outset of the disease the abstraction of a few leeches beneath the jaws, or the abstraction of a few ounces of blood from the back of the neck by cupping, may be resorted to. But as the local inflammation soon assumes a malignant form, and typhoid symptoms appear, these remedies will soon have to be exchanged for a stimulant plan of treatment. Sponging with cold water is not admissible; and great care is necessary in giving purgatives. The use of mercurials should be carried only to the extent of regulating the biliary secretions: As the disease progresses, the extreme debility increases; and the malignant character of the disease so apparent, that it becomes necessary to support the waning strength, by invigorating diet, wine whey, —

Cordials, and Tonics, and mineral acids. Sulphate of Quinia, in solution with one of the mineral acids is perhaps the most useful. The infusion of Cinchona is often used with benefit. The presence of delirium should not forbid the use of Tonics. Should the pulse continue frequent & feeble; Carbonate of Ammonia, Castoreum, oil of Turpentine, have all been highly extolled as useful stimulants in Scarlatina Maligna; when nervous symptoms are added to the debility, Camphor, valerian, musk and assafoetida, may be employed. Beef Tea, sago arrow root, with wine in the advanced stage should be given.

Various gargles have been recommended by medical writers, infusions, such as cinchona, of roses, acidulated with Sulphuric or Hydrochloric acids, are those most

usually employed. When pseudo-membranous patches are observed in the fauces, an infusion of cascarilla, with chloride of Sodium and vinegar is a favorite prescription. Sulph. Zinc and Nitrate of Silver have their advocates. For the local inflammation of the throat blisters have been advised, but the weight of authority is against their use. Emollient poultices with mustard and stimulating embrocations are useful.

During convalescence great care is necessary to guard against the sequelæ which may arise from exposure to cold.

Debility should be treated by proper Tonics, such as quinia and the mineral acids.

Scarlatina Faucium.

In treating this form of Scarlet Fever, and the Sequelae of the other varieties, the Practitioner must be governed by his own judgement. They should all be treated upon the same general principals, as idiopathic diseases.

Much has recently been said and written with regard to the prophylactic properties of Bella donna in this disease, But the observation and experience of many medical men have shown but little to establish its efficacy as a preventive, and until experiment shall establish its power as a prophylactic, the Practitioner along with its use, should not be induced to relax other prevention measures, such as a complete insulation of the affected, ventilation,

cleanliness; (the free use of the chloride &c) with such other means as he may consider proper & necessary.

Gentlemen of the Faculty.

I claim your indulgence for this my first effort in Medical Composition, and beg of you to view with a lenient eye, all its errors and defects, promising that if industry, perseverance and energy, in the pursuit of the science of Medicine will avail, never to relax then, so long as any advancement can be made in the acquisition of the knowledge of such a noble Science.

An

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Inaugural dissertation

on

The subject of Pleurisy

Submitted to the examination

of the

Provost, Regents, and Faculty of Physic

of the

University of Maryland

for the

degree of Doctor of Medicine

By

Henry J. Edmonds

of

Lancaster County

Virginia.

÷ Pleurisy ÷

This is an inflamatory disease, of very frequent occurrence, occurring no doubt often, without the patient having any knowledge of its existance; as, in most cases of Post-mortem examinations, adhesions of the pleura have been discovered, which must have been the result of inflamation of the pleura, at some period of life. The disease may be associated with Bilious fever, when it will be called Bilious Pleurisy, or with a Typhoid state of the System, when it is denominated Typhoid Pleurisy. Both Pleurae may be inflamed; but they rarely are so; more commonly the right pleura is affected, and this may be entirely, or partially involved. I shall speak of the disease under the varieties, of Acute and Chronic Pleurisy.

Anatomical Characters.

Acute Pleurisy ÷ The membrane appears red, and throws out a substance

which concrets, and adhers to the surface of the pleura, as a false membrane; and it also pours out a serous liquid, which does not concrete; and these two forms of extravasation, exist generally at the same time. The extent of this concrete matter, corresponds with the extent of the inflammation, and imparts a feeling of roughness, to the membrane. The liquid effused, varies in quantity from a few ounces, to several pints and in the chronic form of the disease often fills up the pleural cavity, distends greatly the chest, and displaces the abdominal, and thoracic viscera. The liquid may be either a yellowish serum, sero purulent; or it may be purpus, having no odour, and changing its position, with the movements of the patient. The lung is forced from its natural position, by the fluid, towards the upper, and back part of the chest. The degree of compression of the lung,

depends upon the amount of fluid present, which is often enough, to reduce the lung to a very small cake. This happens much more frequently, in the chronic, than in the acute form of the disease. The air cells, which are now compressed, do not adhere, but expand when the lung is relieved, from the pressure of the liquid — Occasionally, air may be found to exist, along with the fluid, in the pleural cavity, which is owing to a tuberculous cavity in the lung, opening into the bronchus, and thereby admitting air into the pleural cavity. If the case is to terminate favorably, the effused liquid will be absorbed, and the opposite surfaces of the pleura, remain united, or not, according as there has, or has not been formed, a false membrane, by which the surfaces may be united. When the liquid is absorbed and leaves the two opposite surfaces, thus to come in contact, if the false

membrane exists, they will become united by means of it. After the effused liquid has been absorbed, room is left, for the lung to expand to it's healthy dimensions

Chronic Pleurisy:- This form of the disease, is merely a continuance of the acute form, and presenting similar anatomical characters. In this form of the disease, the false membranes differ, from those of the acute form, in being thicker, and the quantity of effused liquid, is much greater in the chronic form. The liquid is effused in such quantities, as to compress the lung so much, as to render it almost impermeable, to air or blood. The heart, and that portion of the abdominal viscera, lying immediatly under the diaphragm, are also much displaced. If the disease is to terminate in health, the effused liquid will, as in the acute variety, be absorbed

but the lung, from long pressure, will not immediatly expand, when air is inhaled, and therfore the walls of the chest, are forced in, by the pressure of the atmosphere . . . .

Symptoms & Course of the Acute form:
The disease commences with a chill, and pain, in the side, other symptoms of the disease, are fever, and cough, and quick breathing. The pain, or stitch in the side, (as it is term-ed) is very sharp, and severe, the patient feeling, as if a sharp instru-ment, were thrust into his side. Its most common seat, is in the mamary region, though found elsewhere. It is increased, when the patient draws his breath, when he coughs, or by pressure upon the inter-costal muscles, and also when the patient lies on the affected side, The pain continues severe, until some what relieved, by the effusion, which takes place. The cough which attends

The complaint, may be dry, or there may be mucous expectoration, which in case of bronchitis, may be streaked with blood. The breathing is always difficult, at first on account of the pain, and afterwards from the effused liquid. In consequence of the pain being increased, by taking a full inspiration, the inspiration is cut short, before the lung is fully expanded; in consequence of which, but little air is taken into the lung, and therefore the deficiency, must be supplied by an increased number of inspirations. The fever, is attended with a chill, hot skin, frequent pulse, loss of appetite, furred tongue, scanty urine &c. There is an exacerbation, and remission of the fever, daily; the remission coming in the morning, and the exacerbation in the evening. Much importance, has been attached to the physical signs, in this disease, in forming a diagnosis. Before

effusion has taken place, percussion yeilds a clear sound; but when the acute exudation, has covered the surface of the membrane, the friction sound is produced, which is caused by the rubbing of the opposite surfaces, upon each other, and if the hand be placed upon the chest it will receive a grating sensation. After liquid effussion into the pleural cavity; percussion gives a sound, differing from that in health, as before effussion has taken place. Now instead of clear sound, we get a dull or flat sound. At first, it is observed in the most dependent part of the chest, because the liquid first collects there, owing to the erect position of the patient. When the whole cavity is filled up with the liquid, dullness in percussion will be observed all over the affected side. The subclavicular region, owing to its high position, will be the last portion of the chest, to

give the dull sound, on percussion. As the liquid is effused, and the lung compressed by it, the respiratory murmur, begins to diminish, increasing in feebleness, until in some cases, it is entirely lost. When the fluid in a moderate effusion, intervenes between the lung, and the wall of the chest, a bronchous sound is observed, termed from its resemblance to the bleating of a goat; Aegophony. While the chest is distended, if the two sides of the chest, be measured with a tape, the affected side, will be found to measure more, than the unaffected. The measurement should be made on both sides, during a full expiration.

Symptoms of the Chronic form.

This is generally, a mere continuance of the acute form. In this form of the complaint, instead of the sharp pain experienced in the acute form the patient, feels an uneasiness, weight, or oppression, in the side. There may

be in this form, as in the acute, cough, which may be, or may not be, attended with mucous expectoration. The chest is considerably distended on the affected side, by the effusion; the intercostal spaces are widened, and rendered convex by it. The heart is sometimes displaced so much, when the effusion is on the right-side, as to be felt beating near the left-axilla. The liver is depressed by the weight of the fluid, below the lower ribs. The other abdominal organs, lying near the diaphragm, are also below their normal position. There will be a dull flat sound obtained, on percussion over the distended side; and if the side is much distended, the respiratory murmur, will be entirely lost. After a while the fluid is either removed by absorption, or remains until it proves fatal, or escapes through an outlet, made for that purpose, after which the sides of the

chest contract. In some cases, when there is pus present, instead of serous liquid, there is a communication, established between the cavity, and the bronchus, and the matter escapes by expectoration. The pus may also make its way through the walls of the chest, as an abscess, communicating with the external air. By either of these entrances air may enter the cavity, and acting as an irritant, give rise to fresh inflammation

Causes

Pleurisy is generally brought on, by exposure of the body to cold, and is especially apt to be, if the individual has been previously perspiring or heated. The disease is also the result of mechanical injuries, and the transfer of irritation. On the sudden cessation of habitual discharges, other diseases sometimes cause it, as tubercles, which give rise to the disease by directly irritating the membrane,

or by the opening of an abscess into the pleural cavity. It sometimes results, from the propagation of the lung to the pleura. Men are more liable to the disease, than women. This is doubtless, due to the greater exposure of the former, to the causes of the disease. The disease is common to all ages, and is most frequent in the winter, and the spring of the year

Diagnosis

The diseases, with which Pleurisy is likely to be confounded, are Pleurodynia, Pneumonia, and Pericarditis. From Pleurodynia, it is distinguishable by the presence of the physical signs, which characterize Pleurisy, and which are absent in Pleurodynia. The fever and cough, also present here, are absent in Pleurodynia. The pain too in the side, is not so

shifting, as in Pleurodynia.
From Pneumonia it is distinguishable, by the Character of the pain which in Pleurisy, is more sharp and severe, than in Pneumonia, being, in the latter disease, more dull, and undefined, by the Character of the expectoration, which in Pneumonia is viscid, and of a rusty Colour, while in Pleurisy it is transparent, or whitish, or it may be streaked with blood; and, by the friction sound, which is absent, in Pneumonia. The Distension of the chest, by the effused liquid, and the displacement of the abdominal and Thoracic Organs, present in this disease, are absent in Pneumonia.

÷ Prognosis ÷

When one lung only, is affected, if it be properly treated, in the

early stage, it will generally end favorably; if the pleuring be double, the affection must be considered more serious; or when associated with disease of the heart, liver, or kidney, it is more dangerous, than when these affections are absent. It is more serious in the old, than in the young, and vigorous.

Treatment. (Acute form.

This form of the disease, demands and bears well the lancet; and, it should be employed at an early period of the affection. With regard to posture, the patient should be sitting erect, in bed, and the blood allowed to flow, until an impression is made,

on the pulse. As a general rule, from twelve to twenty-four ounces, may be taken at once, which will often suffice to arrest the disease; Should the pain return, after having been once relieved, the bleeding should be repeated, if the pulse will admit it. Should even the pain have ceased, if the inflammation still remain, as indicated by the pulse, general bleeding must be resorted to, or, the same purpose may be effected, by the application of leeches, or cups, to the chest; followed by an emollient Cataplasm. After the employment of the lancet, the bowells should be evacuated by Cathartics, such as sulphate

of Magnesia, Senna with Salts &c; and should afterwards be kept open, at least once a day. After the bowells have been thus unloaded, Opium and Ipecacuhana (a grain of each) combined with two or three grains of Mercury, may be given at bed time. This will afford the patient sleep, should the pain be likely to prevent it. At four or five days after this treatment, benefit may be derived from the application, of a blister over the affected part, and at this period, should there be much effussion, Mercury should be given until the gums are touched. The absorption of the fluid will be promoted by the employment of Calomel, in connection with

squill. If there be frequency of the pulse, without debility, digitalis should be given. When Catarrhal symptoms exist, Seneka is very usefully employed. In the treatment of Pleurisy, the state of the system must first be looked to, and if this be asthenic, general bleeding, is generally inadmissible; but cups and leeches, may be usefully employed, along with Mercury, and blisters. In Bilious pleurisy, Calomel should be employed, and when it assumes the intermittent form, quinia should be administered. After this the patient must be placed, on low diet; should be kept at rest, and avoid coughing, and talking, as much as he possibly can.

Chronic form:

It is but seldom found necessary, in this form of the disease, to use the lancet; and when the loss of blood is indicated, it should be taken by cups, and leeches. Blisters and pustulation with tartar emetic, are of very great use, in this form of the disease. Combinations of Calomel, Squill, and digitalis are the best, internal remedy and with a view to promote absorption, iodide of Potassium or of mercury, may be used. Cough, should be allayed, by the administration of Opium

H. J. Edmonds M.D.

An inaugural dissertation
On Malaria.
Submitted to the Consideration
of the Provost, Regents &
Faculty of Physic of the
University of Maryland.
For the degree of
Doctor of Medicine.
By
1855 — Henry W. Brent.

the nature of Malaria. Its mode of producing disease is unknown, & we are only certain of its existence, when we witness its effects upon the system. The most plausible theory regarding its mode of operation, is, that malaria is absorbed by the blood vessels through the medium of the lungs, skin & mucous coat of the intestines, & thus circulating with an organized fluid, produces inappreciable changes in the physiological condition of the body. In the the expressive language of another, "we see the life of all the blood is touched corruptibly," and disease speedily supervening. We observe the pale & sallow cheek, the characteristic enlarged spleen, the defective nutrition & general malaise; but behind these local expressions & anatomical hints, as far as I am aware but little has been discovered. If the air is much contaminated by this volatile substance, & the patient debilitated by previous sickness or excesses, he will most ~~prob~~ probably have bilious or congestive fever; if less impregnated, he will have the milder type, intermittent. So that the more intense the cause, the more serious will be the malady. There is a corollary flowing from this ~~pro~~ supposition, which if generally known I fancy would have many admirers & strong supporters. Hearty meals & stimu-

lating drinks are supposed to diminish absorption, & are therefore placed on the list of preventives. I am acquainted with a few of the disciples of this creed, who indulge in their morning julep with scrupulous punctuality, & send the same companions every hour through the day: yet they exhibit no signs of better health than those around them. The chain is sometimes broken & malaria then commences its work with double vigour. Another fact worthy of notice is, that malaria does not exert its influence alike on all or with equal potency. Habit & residence in a miasmatic region any length of time, seems to mitigate the injurious effects of so deleterious an agent. Hence strangers on a visit to such places are more liable to contract malarious fever, than they who are seasoned to it. Again the same amount of poison that would vitiate the blood of a sojourner in miasmatic regions, & produce so much functional derangement, that bilious fever would supervene; the same amount I say would not be equally as noxious to one who had become acclimated. Regarding the freedom from all such poison, which, it is stated the negro enjoys; is to use a vulgar expression rather far-fetched. It may be true to a certain extent; & indeed the remark may be extended to the entire category of diseases;

for as far as I can speak from observation, the negro is less frequently attacked by disease than the white man. But to say that the negro's skin is proof against malarious endemics, is to assert that, which conflicts with the daily experience of many practitioners.

The subject of malarious poison is verily an extensive & inviting one. It presents to the medical world a vast field, which assumes a variety of forms & colours, corresponding to the glasses through which it is observed. Here it is, the theorist may weave his web of speculative doctrine; while the practical physician contenting himself with matters of fact, quietly proceeds on his way; carefully observing the different phenomena that take place before his eye; & builds up an opinion, which directs him in his treatment, when called to the bed side of his patient. Here too the skeptical has found an opportunity of gratifying his blind propensity. & Finally the humoralist, if there be any of that ancient band in existence, is here he would grow most persuasively eloquent. Yet strange to say although the subject spoken of is one of such interest & vast importance, because of its baneful effects over large portions of the world; still very little is known regarding it. Nothing posi-

tive or satisfactory has been ascertained as to its nature or mode of acting on the human frame: in a word, our knowledge & acquaintance with malarious poison, has increased but little since the days of Lancisi, the first who gave it that study and attention, which it so justly claims from the profession; & the first to form a distinct idea as to its actual existence. To give an epitome then of all that is known relative to malaria, will be no long story. We are certain that such a poison exists, call it by whatever name you will. We know also that this malaria produces specific effects upon the human body, which are mild or severe in proportion to the greater or less amount and intensity of the poison, together with the condition of the system at the time of its introduction. There is every reason to ~~believe~~ justify the belief, that vegetable decomposition, as well as heat and moisture, is essential to the generation of these effluvia; & that the same have an affinity for, or are attracted by water, which dissolves them, or at all events renders them harmless by some preventive influence. Observation has taught us that the favourite habitats of these exhalations, are low marshy situations,

though they are occasionally met with elsewhere. We can assent with a relative degree of certainty, that malarious diseases are due to a vitiated state of the blood, occasioned by the absorption of malarious poison through the blood vessels & absorbents, when once it has been received into the air passages. The pathological lesions of this ~~the~~ poison, as evinced after death are the following. An enlarged spleen depending on congestion, of a dark colour & pulpaceous consistency. More or less gastro-intestinal inflamation, with congestion of the lungs & brain. The liver is likewise altered in size & appearance. It loses its natural reddish brown colour, & assumes in its stead a slate hue, which is a positively diagnostic sign of malarious disease. Together with these we always have a watery & spanaemic condition of the blood, which accounts in part for the dropsical effusion, we frequently see occuring as a sequelae of the fevers now under consideration. These fevers are sometimes complicated with bronchitis & pneumonia. With the view of simplify the treatment, it is generally divided into that which is applicable during the paroxysm, & that to be adopted in the intermission or abatement of the febrile symptoms. In the former stage, viz. that of

exacerbation; the treatment is again subdivided to meet the indications of the cold hot & sweating periods. Little need be said here however, since nature will readily suggest to the patient the means of seeking relief & comfort as far as they can be procured during the paroxysm. Warm applications to the feet, warm drinks & a large supply of covering, together with depletion if we fear excessive visceral congestion will fulfill all the indications of the cold stage. As to the hot & sweating stages, they are best heeded by consulting the feelings of our patient. Refrigerant drinks, effervescing draughts to allay irritability of stomach &c. Should our patient complain of headache & grow delirious see bled if the fever be not asthenic & our patient much depressed. Indeed the remedial agents made use of in the different stages of malarious fevers might be ~~enumerat~~ enumerated, I had almost said ad infinitum. Blood letting, emetics, opiates, diaphoretics, stimulants & antiperiodics: all have had their admirers; all have been lauded for their antimalarious virtues; & although each individual class may be safe & reliable, I may now add that all of them have gone out of vogue to make room for the powerful & invaluable antidote to malarious poison-

the great antiperiodic par excellence — At the present era of medicine the treatment of malarious fever is specific. The sulphate of quinine is the physician's sheet anchor in malarious fevers & their complications. Though in mild cases we withhold its use until the intermission & also generally premise its administration with a cathartic of Calomel & rhubarb or other purgative, yet in more severe forms of the fever, we give the drug immediately upon seeing the patient. Where there is excessive febrile disturbance & delirium, there is a greater demand for the drug; & we consequently administer quinine or cinchonine with one hand, while we diminish vascular excitement with the other. We have evidences of this poison in the system, we know the antidote & we give it in large doses & with confidence. — In considering the natural history of this poison, there is one point, which, were it omitted would be unpardonable if through negligence, and greatly to be regretted if from ignorance. It is a fact which is never lost sight of by the sound pathologist, & if remembered by the practitioner, affords him many useful hints in the sick chamber. We should always ascertain from our patients, whether they have been attacked by malarious fever, or have previously been living in

a malarious country, or otherwise subjected to its unhealthy influence. We should be particularly careful to make this inquiry, if we find the disease we are treating varying in its character & assuming a periodic type or only inconveniencing our patient by its greater intensity at certain regular periods in the twenty four hours. When we receive an answer to this effect, we will be most certain of affording our patient relief, by directing our remedies directly against this latent cause, this poison that is circulating with the blood, & giving birth to so long a chain of morbid consequences. Indeed so thoroughly does this poison saturate the entire economy, that not infrequently we behold diarrhoea, dysentery, uterine disorders & other derangements, stamped with the features & wearing the livery of a well defined intermittent, & which are promptly relieved by repeated doses of Quinine.

There is another preparation of Peruvian bark, which of late has attracted the attention of physicians. I allude to the sulphate of Cinchonina. This has been given in malarious fevers with considerable success, affording ample & satisfactory proof of its remedial virtues. It should be given in larger doses than the sulphate of quinea, since the latter is the stronger salt. Like quinine it acts as an antidote to malaria, produces a sedative control over

over the vascular system & restores the blood in conjunction with iron, to its normal healthy condition.

I am aware that a great deal more might be said on this subject, and if I have omitted facts relative to malaria, of great interest to the chemist, pathologist, or practitioner; and certainly there are many; if I have omitted facts of much interest I say, it is because I fear lest what I have said, has reflected so little light on the subject, & still less credit on myself; that any further attempt on my part would be but a poor apology for my presumption. But considering Malaria to be a subject of vital importance to the physician, nay to all mankind, since it is the bane & scourge of great portions of the world, & the cause "of evils unnumbered" in our own fair Maiden land; let us hope that the day is not far distant, when the mist of uncertainty envelloping this class of morbific agents, will be dispelled by the rays of unchangable truth. That the pioneers of science, will cut the gordian knot which has so long augured disappointment to the noble efforts of many; & place us in possession of a thorough & intimate knowledge of Malaria, & the means of warding off its attacks. Such a deed would constitute a memorable epoch in medical history, & add a jewel to the crown of the learned discoverer.

Henry W. Trent.

An

inaugural dissertation

on

Prophylactics;

respectfully submitted to the examination

of the

Provost, Regents, and Faculty of Physic

of the

University of Maryland,

for the degree

of

Doctor in Medicine,

by

Felix Fuitz McManus

of Balt.e Maryland.

Feb. 14th 1855.

Introductory.

In the selection of a subject for my thesis, I experienced the same difficulty that the author of Child Harold pre-tended he did, when he commenced his Fine Poem;- but whilst it was af-fectation on the part of the "Poet sublime",- 'tis with me a candid admission.

Disease is a curious thing. It may exist alone, or it may be complicated. Peyond fear may be its cause, and there behind it, after its removal, no result which will outlast its late sway;- while, on the other hand, the disease may be sup-plicated, while its effects are visible in the patient's organs that lie in the abdominal viscera. Intermit-tent fever may leave its footsteps out short by quinia, cusmie, or other therapeutic agents; and this common

miasmatic disease may be cured; but it may leave its poison behind, and, like the inebriated Spaniard, leave behind = many that aguean fever was there. Podagra will oftentimes leave us no clue to lead us that our opinionated friend was ever sick; and another suffered with pain it translated, by metastasis, to his abdominal organs. Rheumatism may pass off, and we hear of it no more; while, at the same time, a wounded one may be found in the next hospital cured:— he has no inoculation; but, pericarditis, and endocarditis refer us to that complaint. Gonorrhea may leave us as soon as it found us, or it may leave us deaf, dumb or blind. Syphilis may pass off under treat= =ment; or, it may leave erupting sore throat, and periostitis. All the above are common affections, and all bear testimony to curious and

intricate is disease. A man may be ill, and we are called to see him. He is comatose, or, he is violently delirious and he can answer no questions. Friends around him are quite unacquainted with his history. We must do something. We must first diagnose his case, — then treat it. How are we to know what idiosyncrasies may exist in his system? It is a delicate subject. Again, we have before us an infant. It cannot inform us of its ailments. The nurse tells us the little patient has pain. The baby has pain, but a vast variety of disorders have that symptom. At length we press its back, in the lumbar region, and it displays instant tokens of pain, — but infantile nephralgia, lumbago, inflammation of the psoas muscle and pelvic peritonitis are all characterized by this sign. We cannot learn which is the direction of the pain; for, if we know it went

Urinary Organs, you the kidneys to be given, and two of a similar character, we might say it was nephritis. Then we are uncertain whether or not it be renal inflammation. Upon being questioned, the nurse will say the child has gastric disturbance and scanty micturition. We find the urine diminished and the kidneys retracted. This can only mean nephritis; but, nephralgia is sometimes attended with all these phenomena. It cannot be nephralgia, however, because we have fever, and the pain is of greater violence and more spasmodic. In this manner we go thro' a complete routine to discover the true character of the malady, and we begin pronounce it nephritis. Then what you are to do? Is it of vascular origin or not? Thro' this minute and difficult investigation, we be to arrive at certainty,

and then comes the wise prognosis and the well directed treatment. It makes a great difference which we have in some cases; but, between nephritis and nephrargia, the one would not be so dangerous.

Thus again we perceive the various and hidden nature of disease; yet diseases are generally selected by students as the subjects of their theses. They know our most diseases theoretically, — practically, they know nothing. When have they had the opportunity to make pathological & physiological observations of remedies? — when have they had the opportunity of learning healing effections? — when have they had the opportunity and time to make microscopical observations in human tissues? If they give any new idea, without experience, then they enter the romance of medicine, and speculate as to abnormal causes or therapeutic actions;

I hope they write learedly; but, without doubt, they write learnedly and practically. If, on the other hand, they have not to write something new, they report, revision, from the Inspector's register; or, dress in a new suit, the opinions of Dr Watson, Good, Rush, Armstrong, Wood, Ewart, or some other, and neither learn nor teach.

I'd imagine I have another and an interesting subject. I'm not obtuse, but in course of producing it, - remembering an adage "that prevention is better than cure"; consequently I commence on Prophylactics.

Prophylactics.

In treating of prophylactics I shall pass lightly over those medicines which are reputed to act as preventives and dwell more in detail upon those agents which are invoked sanitary-agents whose action may be expressed by a Shakespearean quotation – "One fire burns out another's burning."=

1st Vaccination.

From the days of Montezuma to the present time, our country has = = = = = in her population, diminishing in degree of latitude and longitude, in bind, temperate and frigid zones, and peopled by men of different tongues and diverse hearts, the pestilence has breathed its pestiferous breath, and swept, like the destroying angel, from the earth, multitudes of its victims. Depopulated Space;- almost dis=

thread electricity in the rapidity of its fragile course. To contagion forbade the discharge of their duties that nature prompted, and the tender-hearted sister, the gentle sister, or mother, the endeared wife that dared stand to render relief to its victim, was sure to contract its infection. Even humanity was terrified. The more desponding opened to attacks upon all the consolation and joy in life forever, and oftentimes even life for ever, but oftenest for the old bachelor carried its victim to another world. This dread disease is an exanthematous fever, and of so dangerous a nature as to prove fatal in twenty-five percent. if I have it attacks, according to Dr. Wood, but Dr. Watson makes it only 20 p.c. — Even after recovery, its stamp is still left in the disfigured body. It never attacks a person twice, as a general rule; but then, like other general rules,

tion its acceptance. — Vaccination
produce a disease in the human
system analogous to small-pox, or
small-pox itself modified, this
artificial disease tend to diminish the
susceptibility of the system to the
true disease. Lady Mary Wortley
Montague introduced into England,
upon her return from Turkey, in
1721, the mode of innoculation; a
prophylactic agent with which she
became acquainted while at the
Ottoman Court. This, like all other
improvements, met with much op=
=position, from unprincipled and un=
=thinking men;- but Lady Montague's
station in society, demanded a hearing,
and with a nobleness worthy of her,
she first innoculated her daughter.
Then Dr. Keith, unwilling that medical
men should refuse investigation, placed
the virulent virus under the vaccination of
his own child. After this, a general

adoption of this new acquisition to medical science followed. The mortality in inoculated small-pox is, according to Gregory, [illegible] in [illegible] "but Sam Dinsdale, a great inoculator, declared that not one in fifteen hundred died of the original disease" (Watson Lect. "We may take Dr Gregory's estimate as being probably within the mark" (Watson) In the inoculated disease the period of incubation is comparatively short; the pustules are seldom numerous, and still more seldom confluent; and the secondary fever is generally slight or wanting. The objections to its use are that occasionally the inoculated small-pox proves fatal, and, says Dr Wood, (Practice, 1874) "even, however, as the disease is, it raises one objection to the operation; but another and much more serious one is, that, tho' it protects the individual inoculated, it makes him the centre of a conta=

-gious influence, and thus tend almost inevitably to keep up the disease in the community." The inoculation spread widely and rapidly over the world but scarcely had it reached the limits of civilization, when Dr. Jenner, in 1798, twenty-seven years after the introduction of inoculation, gave to the world his brilliant discovery, - a discovery that he had been investigating for thirty years, and "matured into a rational and scientific form, by a mind deeply imbued with the best principles of sound physiology." - a discovery that immortalized him, and beneficent mankind.

Thirty years previous to the final announcement of this benefactor conferring to practical medicine, Dr. Edw. Jenner, observed his first case of approaching the cow-pox matter as a prophylactic medicine. He was engaged in his preparatory studies at the time, but in his mind he treasured the germ to

known in a proper season, presenting in experiment and fitted with the spirit of inquiries. The doctor obtained the immunity from varioloid by those milk maids of Gloucestershire who had contracted the so called cow pox from the udder of the cow. About the same time or February or later attention to the experiments of Jenner, according to Dr. Good (Study, Vol 3, p 37) "a farmer of sagacity, of the name of Nash, during attending to these facts, (protection which of course) had the courage to attempt artificial inoculation on himself; and the attempt is said to have succeeded completely". After all due investigation, the Dr. of Berkeley published his discovery. It met with much opposition at first, but "success vindicated its adoption," and "believing very large city soon appointed its vaccine physicians.

It is well known that virus, no susceptibility to an influence

exists, there no impression can be made. For the human system we have, as a general rule, susceptibility to all diseases. In some persons we see this susceptibility tending in particular cases; in others, we see it drawn upon to such an increased degree as to form an idiosyncrasy: The latter is evinced by the quick and what might be called, the abnormal impression made on some systems by the administration of mercury. The former condition is exemplified by those constitutions, which, despite repeated exposure to the poison of miasmata and exanthematous fevers, are incapable of receiving the morbid impression. In catarrhal affections, in the serious local inflammations over the whole body, we have a continued susceptibility to a reoccurrence of the disease, but small-pox is a non-reoccurring fever, having a single susceptibility to its

morbid influence. One attack generally exhausts this, and until its exhaustion or more properly, its removal, the system recognises its inoculation. Now ample experiment has shown that a mild form of the disease is as good a protective as a severe attack and hence to assimilate the susceptibility, inoculation was employed. At a later date, for reasons very obvious, the vaccine virus was found better, and hence its general employment. This a better protective than inoculated small-pox, vaccinia has also the advantage of a milder development. The old hypothesis of "the grease" has long since been over-turned, and later experiments have proven that the cow can be affected by the contagion of variola, and that the crusts taken from the udder of the cow, after this attack, are the genuine article. This proves conclusively that the disease undergoes a modification in the cow;

of this I shall speak again, as affording ground for further investigation. The vaccine disease runs its regular course in about twenty-two or twenty-three days. In the preceding is the conclusion of a report on Vaccination, made by M. Chambrenner to the French Academy. I come to quote it.

1st "That the preservative power of vaccination is almost always permanent, and that when it is not so the period of immunity varies greatly according to individual peculiarities.

2nd "That the vaccine virus does undergo a positive deterioration by transmission through successive individuals.

3rd "It is therefore desirable to obtain fresh lymph frequently, which might be done by taking it annually from the cow, by which we should be much more sure of succeeding than by revaccination, or any similar means.

4th "There is no necessary connection

between the intensity of the local phenomena of vaccination and its preservative power, but there is such a relation between this preservative power and the amount of constitutional disturbance. So "Revaccination is desirable not because it is always necessary but because we have no means of distinguishing the cases where it is needed from those where it is superfluous." (Brit. & For. Med. Rev. No. XLV. p. 308)

The second article of this report refers to the determination of the various virus, by its passage through different persons, — and this fact of determined value is generally recognized by the profession; — Consequently, in the next article, the Dr. advises persons to be frequently obtaining fresh lymph. This is indeed an impossibility. In consideration of this fact it has been suggested to use the lymph from a small-pox pustule, mixed with milk; — this is called the lacto variolus

matter. I read an account lately in a medical journal which professes to be an extract from the Revue Medicale relative to this subject entitled an "essay on lacto-variolous inoculation, as a substitute for vaccination" by Dr. Bosu of the Egyptian Hospitals. Dr. Bousu includes an account of his experiments to the Academy of Medicine on this subject, which were most satisfactory and convincing. The effects of this new preventative means are quite as effective as those of the cow pox matter and have been a similar development, as far as the disease they produce is concerned. Still, notwithstanding of this advantage, we can always obtain the lacto-variolous matter when it would be impossible to secure pure crusts from the cow. Dr. Bosu, speaking of the nature and conditions of this mixture, says that it is composed of equal portions of variolous pus and milk.

She continues "But why, it may be asked, this preference for milk above all other fluids? Does it any positive influence on the variolous-virus, or is it that we only diminish its activity, as that of many acids is known by diluting them with water? Milk appears to me preferable, because it is, like the variolous poison, a product of animal secretion; - that like it, it is easily absorbed. But saliva, tears, the serosity of the blood, are also animal fluids, and equally absorbable. It would doubtless be useful to try these fluids, and others also; their effects would perhaps justify the preference given to milk, by demonstrating that this fluid possesses a modifying action on the variolous-virus." As regards the virus, it should always be taken from pustules large, distinct, pointed, having little inflammation around and distended by a slight opalescent serosity. Pus should never be taken from an indurated sore that

[illegible] being vaccinated is the best. The local phenomena of the disease can be found in the pustule. It [illegible] its course in thirteen days. It can be transmitted like the vaccinia, thro' successive individuals, by taking the matter from the pustule of the inoculated person. It can also be prevented.

2nd Syphilisation.

In the two last numbers of the last volume of the Brit. and For. Med. Chir. Review, under a review of the Sanitary System of the European Continent, and in particular of Paris, the editor admitted the total inadequacy of state interference to suppress venereal disease. Venereal in its rapid spread is likely to become one of the most disastrous afflictions of man and hence to prevent its development is an object of the greatest interest. If indeed the effects of this disease were

original to from which contention is in the bottom, then we might say that there was just ground then to begin — for it would be an impossible & absolutely justice to wait for the existence of one of the great laws of this chancre — Dr. Jean-Marie to Lafe, John Hunt to Ford, — attributed gonorrhoeal ophthalmia — eruptions, the tissues, — secretions &c., extending from a mucous to a cutaneous, — its effects are "communicated such intuition. Having nothing about this method of prevention either from hearsay or from personal experience, I will copy the entire passage in regard to the subject:

"Before concluding our remarks concerning syphilis, we will allude to the method introduced in France of inoculating the syphilitic poison for the purpose of testing the ravages of this disease; it has even been asserted that secondary syphilis has

been radiating around by their orbits."
After describing the process of the operation, - its effects &c, also relating the experiments, the author says again "We have now endeavoured to condense in fifty two propositions the results of the method of syphilitic inoculation as explained by Dr. Auzias Turenne, in N° 48, of November 1853; as to the value of the statements contained in these fifty two propositions, we forbear expressing any opinion for the present.

1. There is but one syphilitic poison although it may emanate from various sources; but its effects may, or may therefore adopt several degrees of syphilitic localization.

2. An individual who is capable of resisting the action of the lower degrees of this poison, need not necessarily be capable of resisting the higher degrees.

3. All other circumstances being equal, the character of the virus descends in

dence the further the process of syphilisation is carried, and the more extensive the surface from which the virus is secreted and the larger the quantity.

4. A person which ceases to affect one person, may still be able to affect some other person who is less thoroughly syphilised, and particularly one who has not yet been inoculated at all.

5. If a perfectly healthy individual is inoculated with a person of the highest degree, the first chancre will be very considerable. The subsequent chancres will be less active, especially if the virus is taken from the same individual, and the pus which is secreted by these subsequent chancres, will be of an inferior quality. The more frequently the process of inoculation is repeated in the same individual, the more thoroughly the organism becomes impregnated with the syphilitic virus.

5th. The virus taken from an individual that has been repeatedly inoculated, acts with less virulency not only upon the same individual, but likewise, although not to the same extent, upon others not yet inoculated.

7. This virus of a less degree is obtained by repeated inoculations of the same individual in a state of health, and after one second or third inoculation of that same individual results in the production of the most inveterate, viz: the indurated or Hunterian variety.

8. Those who believe that, at a certain period, the chancrous virus is no longer transmissible by inoculation, should have considered the double cause of this want of transmissibility.

Namely, a. The alteration which the chancrous virus undergoes in consequence of the process of inoculation in the same organism; b. The diminished sensitiveness of the

organism to the homogeneous virus to be inoculated. These two circumstances lead to a perfect insusceptibility of the same individual to the action of its own virus.

9. Every chancre has a period of decrease during which it can be inoculated in every body in the same degree and time.

10. All inoculated chancres have the same tendency to cicatrise, and they do cicatrise provided its tendency is not neutralised by some incidental influence.

11. Chancres of the smallest dimensions, which are generally likewise of the longest duration, require the most time to accomplish the process of cicatrisation.

12. The extent and duration of the cicatrisation may likewise be influenced by the locality of the chancre.

13. Chancres of the same date, but of different origin, in one and the same individual, may, especially in the commencement, show widely different de=

=gree of vitality corresponding to the quality of the virus which has been employed for the production of the chancre.

14. Two chancres of the same origin and date, in different individuals, may exhibit different degrees of action inversely proportionately to the syphilization which had been effected in them.

15 Later chancres produced in the same person, may be much more considerable than former ones, if the virus which caused them, is more intense.

16. Even the weakest virus is still capable of affecting persons who have never been syphilitic.

17. If a person ceases to be sensitive to the action of an inferior virus, he may still be sensitive to the action of a virus of a higher degree.

18. This virus may then still continue to produce two or three successive chancres in the same person.

19. If a person is inoculating with a

virus of a higher degree than that which is secreted from the existing chancres, the virus which is obtained from these new chancres, is not, on this account, superior to the formed virus.

20. By thus renewing the production of chancrous virus in the same person, we finally secure him complete against all syphilitic contagion.-

21.- The best and quickest mode of thoroughly impregnating an individual with chancrous virus, consists in effecting several successive inoculations with a very pure and continually renewed virus; this method is however, attended with pain, and care has to be had to prevent the chancre from becoming phagedenic.

22. The following is the best mode of syphilizing a person who has never yet been syphilitic: a, by means

a single puncture from a lower degree is inoculated, with which the same person is inoculated with his own virus every eight days, and afterwards even still more frequently until the virus ceases to be any further affected by it; b. Afterwards the inoculations are repeated on the same person with the virus of a higher vacuity and at shorter intervals.

23. If a person is affected with chancre the virus of this chancre may be taken for the purpose of inoculation, and the process may then be continued as described above.

24. For persons afflicted with constitutional syphilis the same process is adopted as for those who had never been tainted with syphilis, with this difference, that virus of a higher degree is substituted as soon as the lower virus ceases to act.

25. The puncture should be as direct

and superficial as possible, so as to reduce the minimum possible size of the chancre. The first cancerous prostate is secretly proportionate in size to the solution of continuity affected by the punction; hence the more direct and superficial the puncture, the less extensive the chancre.

26. Syphilization is a source of strength to the organism; it increases the appetite and the assimilative power of the organism. This method may therefore be employed against other diseases; we know from experience that it has been advantageously resorted to against cancer.

27. Gonorrhoea and phymosis are sometimes, not always, symptomatic diseases; these are prevented by syphilization, and they are cured in every case where the purely syphilitic character of the disease has not been replaced by an irritation of a cat=

anal character.

28. They may be caused by an inferior virus as primary systems, in which case they may be said to be a commencement of syphilisation; or else they may be produced by a superior virus in an organism previously tainted with syphilis.

29. In the former case the inoculation may be successively repeated on the same person; in both cases persons who are not tainted, may be inoculated

30. Venereal excesses which limit the action of the poison to a smaller number, likewise diminish its intensity. In persons who had never been tainted, chancres spread with great rapidity.

31. Chancres which do not cause constitutional syphilis, are a. such as are caused by an inferior virus, and are termed primary chancres; b. such as are produced in persons undergoing the process of syphilisation, and whose

organisms have been thoroughly im-
-pregnated with the syphilitic virus;
in the former case the germ is deficient,
in the latter the organic susceptibility.

32. The secondary phenomena are
caused by the constitutional infection,
and on the results of the determinate
quality of the virus secreted by in-
-durated chancre. These secondary
phenomena may be compared to the
multiplied chancres of a person un-
-dergoing the process of syphilisation.

33. A person affected with constitutional
chancre, cannot be inoculated with
virus of an origin quality, although
a healthy person may be inoculated with it.

34. Syphilisation not being a pathological
condition, it cannot be effected ~~by~~
or transferred by injections of blood.

35. The infecting power of the chancrous
virus is not proportionate to the extent
of the chancre.

36. The virus of a phagedenic chancre

keeps its quality as long as the chancre remains phagedenic.

37. In order to control a phagedenic chancre by syphilization, a virus of a higher or lower quality than that of the chancre, has to be employed. A pus that can be readily absorbed, should be principally used. A pus which is not readily absorbed, assumes a phagedenic character; pus which is readily absorbed, acts as an anti-syphilitic prophylactic, the more efficiently, the higher its quality or degree.

38. The effects of this syphilitic pus is not always the same in the different stages of the chancre from which the pus is secreted.

39. If the inoculation the chancre developes itself the more rapidly the more thoroughly the individual had already been subjected to the process of syphilization.

40. The conditions which, according to circumstances, is variously, and at certain

periods, observed in certain individuals who had remained free from constitutional syphilis, disappeared again in consequence of the successive modification produced by subsequent chancres.

41. In order to remain perfectly free from all primary symptoms of syphilis, it is necessary to subject oneself to a thorough process of syphilisation; this process, however, need not be carried to a very high degree if nothing else is desired than to be guarded against general syphilis.

42. Persons thoroughly inoculated with the syphilitic virus, are no longer able to produce it; the cause, from which either primary or secondary symptoms spring, is drained.

43. No constitutional symptoms of syphilis result from syphilisation; on the contrary, if any such exist, they disappear in consequence.

44. A chancre once healed is just as susceptible to the syphilitic virus as any

of the part of the skin.

45. Syphilisation is not effected locally; if one portion of the body is under the influence of the syphilitic virus, the whole body is.

46. The prophylactic effects of syphilisation are not transitory, nor are they idio=
=syncratic.

47. Animals are susceptible to the syphilitic virus, now, although not all of them in the same degree. A dog, for instance, is less susceptible than a rabbit; a rabbit less than a cat; a cat less than a monkey in general; we say in general, for some monkeys are more susceptible than cats.

48. A man undergoing the process of syphilisation, passes through various degrees of susceptibility.

49. The less an animal or man is natu=
=rally or artificially susceptible to the syphilitic virus, the more powerful the virus has to be which we use for

purposes of inoculation. A non-observance of this rule is the cause of the frequent failures in attempting to inoculate man or animals, and of the secondary symptoms which have so frequently dimi=
=nished in man.

50. The syphilitic virus in its various degrees is the best standard by which the exciting susceptibility to the syph=
=ilitic virus can be measured.

51. Syphilisation upsets both practicing and theoretically all existing theories concerning syphilis. The importance to the doctrine of syphilisation is directly proportionate to the amount of false theories which it does away with."

In conclusion I add my belief that if this continued communication of the disease is necessary, the attacks should be as mild as possible, and therefore, since the vaccine-virus is weakened by its passage thro' the cow, or by its mix=
=ture with milk, while also its pos=

prophylactic influence is as strong as ever, in virtue of its dynamic action, may not the syphilitic virus be passed through the cow, the monkey or other animals, or otherwise mingle it with some animal secretion as milk, - weakening its apparent effects yet its virulent power protective value remains undiminished.

9. Inoculation with Yellow-Fever matter.

The news of this prophylactic came to me only two a small notice in the Baltimore Sun. It appears that Dr. Wm. Humbrider, a son of the renowned Alex. Von Humboldt, is in Havana, inoculating with yellow-fever matter and is gaining converts to his belief in its efficacy. He may cast another light upon medical science, and speedily prove that his possessed discovery may be other than a metaphysical.

Quinia in Puerperal fever.

"M. Tedet cites several cases which occurred during the prevalence of three different epidemics at Rouen, in which Quinine, given in doses of five grains ter-in-die, and commenced with a few hours after delivery, seemed to exert a protective agency. On the third day, this quantity was diminished and the drug left off about the sixth day. In those epidemics in which the disease commences very speedily after delivery, the quinine should be administered as soon as labor begins. L'Union Med. N°43" Brit. and For. Med. Chir. Rev. No. IV. 1848 - p. 554.

Belladonna and others in Scarlatina.—

The profession is divided in regard to the protective effects of belladonna. Dr. Hoo says that a compound of calomel, the golden sulphur of antimony, with sugar or magnesia, given daily in small amounts, to children, has been used by Physicians of Groningen.

A Thesis,

On the morbid effects of diseased teeth and Gums on the General System.

Presented to the
Faculty
of the University of Maryland
for the Degree of
Doctor of Medicine
Session 54-55

By
W. G. Westmoreland
of Md.

Morbid effects of diseased Teeth & Gums in the General System.

If we reflect on the small amount of local irritation, that is sometimes capable of [illegible] we will not only be prepared to admire its [illegible] a complicated machine—carried on by so many ~~and~~ varied & important functions should resist both foes from without—and traitors within as well as it does. In many instances the dependance of one part on another is so direct, and the mode of [illegible] that there is no [illegible] of action depends upon undiscovered laws of nature, and is known to exist only upon the Evidence of Common observation. Besides this sympathy, [illegible] of the whole organism [illegible]

its parts; and severe or long-continued suffering in any one, however comparatively unimportant, will commonly induce a general derangement of health, or involve the whole body in serious & even fatal disorder. The human system has been beautifully compared to a complicated musical instrument the nerves representing the musical cords, which are continually liable to be untuned by external causes; this is a fact and may if we consider nature as the skilful musician continually watching and repairing its least discordance.

Amongst the many causes of disease, there are few more injurious, than diseased teeth & gums whose continued irritation is persistently acting, both locally & sympathetically on the system, impairing its vital functions, and disturbing that beautiful play of a balanced vital phenomena of which he is the depositary. Even early in life, to advanced age in some constitutions, we have those useful & ornamental organs almost constantly exerting a deleterious influence.

Dental Authors, enumerate a great variety of disease or derangements of those organs (viz Disorganization of first dentition, decay of temporary teeth, difficult second dentition, Caries, Necrosis Atrophy, Exundation, &c. producing critical changes & functional of gums, Mucous membrane &c. which by sympathy in their turn affect the general system with derangement & disease. Dentition is a physiological act or function & in healthy children as might suppose as in the lower animals there would be little difficulty in their accomplishment and such would be the case probably if the child or its parents had as much instinctive faculty as animals, but the poor child if it should have the misfortune to have inherited or imbibed a scrofulous or other constitutional morbific taints, (as we have not under either our refined or artificial or luxurious & vicious modes of life) whose delicate organization rendered exquisite by the short sighted, ill timed, misplaced kindness on the part of parents, the whole energies of vital action being expended in repairing

those bad inheritances, when it begins dentition, is due to suffer some of the diseases to which it is predisposed. Sometimes, even in children of apparently fine health & constitution, we have disease supervening on abnormal teething, a remarkable case of which I saw 2 years ago, a child, of fine development & healthy parents, with nothing remarkable about it except a rather a disproportionate development of the nervous system, was attacked with Brain disorganization, Fetid Diarrhea, centro spinal irritation &c. In determining diagnosis I was led to examine its gums, I found four lower & 2 upper incisors through & the gums of each jaw red & swollen clear back to the angle. I treated it 3 weeks with the ordinary remedies during which time 8 or 9 more of the teeth made their appearance & I thought I could distinctly feel all the rest above the alveolar border. The child in spite of close attention sunk under the inordinate amount of nervous irritation. Writers on first dentition tell us a great variety of diseases consequent to it, amongst which

are Marasmus, Indigestion, Diarrhea, Cholera Infantum, Bronchitis, Pneumonia, Convulsions, Insomnia, Coma, Hydrocephalus, Various Eruptions, Glandular Enlargements, Dermatitis, Ophthalmia &c, but we should only consider teething, as one of the causes of these multifarious Conditions, which exercises a powerful influence on children labouring under any of these Maladies & as a symptom, at least that deserves our close observance.

The process of second dentition, owing principally perhaps to the greater physical impetus to general development, is not usually fraught with so many evils, here nearly all the Dentist or Physician has to do, is to watch carefully this important process that nature be not interrupted in her efforts to remove the old set & supply, & ~~the~~ beautiful permanent organs, which she will be much more likely to do if let alone, as most of the irregularities of the teeth and their bad Consequences are produced by too early & officious extraction of the temporary set, thus diminishing the space by closure of the adjacent teeth, making

it for small or the permanent teeth. The stomach
a similar function gives us great trouble
in making its appearance, generally on account
of pain, I have seen both, induced by the
dentition of the right parts destroying the
patient by exposition.
But the most important and varied morbid
conditions produced by the teeth are somewhere
and its local effects on the gums, alveolus and
other adjacent organs, & by reflex action and
by sympathy on the system generally, and here
I might remark, that it is very strange
how little these influences have been observed
or written by the Medical profession. They
seem to have considered the teeth merely as
a mill for grinding the food and as having
very little more relation to digestion & to other
parts of the system than any other mill, that
if it could only break down the larger masses
of food so it could be tolerated to that all
important receptacle the stomach, which
was capable of mastication to in addition
to its other important functions. It is

but really that Physicians have begun to pay any attention to this matter and it will be a long time yet before it will take its proper stand as a cause of disease by the general practitioner who overlooks it in his search for Bright's Kidney, Disorganized or Total System, Torpid Liver or more probably Neuralgia that being a more fashionable disease than the others at present.

Writers on caries enumerate as its effects Odontalgia, Alveolar Abscess, Periostitis, Necrosis, Inflammation, gangrene, ulceration of Alveolar Process, Fistulous Gums & Maxillary Sinus, deranged glandular secretions &c. as its local effects besides the general diseases that [illegible] as resulting from it [illegible] the urine suppressed and its depressing influence produced by toothache is so familiar to us, we may be familiar even to the point of [illegible] it was not after bill, we become familiarized to it & say of a fellow suffering its tortures that he has the toothache, when perhaps he is suffering

the most intolerable anguish, his whole system in a minute time, his face expressed & his vascular system congested almost to collapse, & great drops of cold perspiration standing on his face; yes it is only the toothache, it would be well for the poor sufferer if his friends had the [illegible] estimate of his [illegible] [illegible] a minute [illegible] on coming to the [illegible] "Oh! faith I thought from the faces ye made ye had the toothache"

Studying the minute anatomy of the mouth & its [illegible] functions,— that during mastication the salivary fluids are mixing intimately with the food preparing it for digestion & assimilation— are the superior organs, those so active, particularly in the latter process, after it is in the stomach & that during mastication is the proper and almost only time of its admixture with the food, we are prepared to estimate the value of good teeth as well as appreciate bad one on digestion hence sometimes arise dyspepsia with its host of nervous disorders making their unhappy

possessor hate life which denies him its luxuries & pleasures. The [illegible] [illegible] from [illegible] the [illegible] teeth being [illegible] surrounded by [illegible] particles of [illegible] that ferment & putrify in them, exhaling the most intolerable odour (some of it being in all probability absorbed through the [illegible] with the oxygen) the teeth [illegible] discharging [illegible] through their open canals — The gums inflamed and ulcerated together with the whole mucous membrane of the mouth & the glands from local irritation secreting a viscid & unnatural saliva. all this being swallowed with the food certainly exerts its acrid and irritating properties on the coats of the Stomach, producing nausea, vomiting, anorexia indigestion &c. directly & being taken up by the absorbents of the Stomach & intestines again enters the circulation to be again thrown off, thus continuing acting as other putrid poisons in the production of disease or at least engendering predisposition, and in addition to all this nature is trying all the time to relieve the local malady by her

imperfect agents, which act to bind up the diseased bone & pus, passing it too through the secretory system to be also eliminated by secretion & exhalation. Thus ultimately taxing the vital powers & consequently their action in the performance of other necessary functions. But it is extremely unfortunate generally for the patient, that after this condition of things has gone on for sometime, the nerves of sensation of the part are blunted, they fail to set up their usual signal of distrp. — [illegible] pathos [illegible] pain [illegible] he [illegible] no complaint of his [illegible] — Their influence in his case, his attendant hunts everywhere but in the right place for the cause of his maladies, feels his pulse, looks at his tongue, perhaps percusses & stethoscopes him; uses his physician's [illegible] water, examines his urine chemically & if there be anything a focus can be had on tries his microscope, and gravely re= =marks "bad case, very much complicated, digestion bad, breath horrid, probable torpor of the portal system, stethoscope [illegible] stiff [illegible], urine

yields lime deposits nervous system very much implicated" and then goes off into a learned dissertation on the wonderful modern discoveries in microscopic anatomy as a sine qua non in determining diagnosis in obscure diseases, leading the poor fellow in utter bewilderment into the vast field of Speculative science and instead of pointing out his tooth & telling him get well, prescribes an alterative for his liver, an opiate to be taken on retiring for his palpitation — an alterative for his urine — and a carminative for his stomach, leaving him with the encouraging promise to call back in a week and put him on a general course of treatment.

Many cases are recorded of diseased teeth and gums producing hysteria, & also producing various diseases of the nervous system by reflex action & sympathy. The most recent case of Tetanus I ever saw was cured by the extraction of a tooth in which a lady just before her confinement was taken with violent toothache. I was sent for immediately and on my arrival I found her on the carpet in a perfect tetanic spasm with

complete opisthotanous &c. Was succeeded by the use of Chloroform inhalations, followed by free venesection opiates &c. in relieving her. & two days after she was delivered without any remarkable except perhaps more vomiting & nervous agitation than common. But one of the most interesting cases of effects of diseased teeth & gums was in the case of Mrs C. a wealthy lady of my county. She had been suffering for one year with intolerable nervous headache palpitations. Uterine derangement with leucorrhea pain in the loins &c. &c. She was under constant treatment & the Uterus, being involved, was thought to be the prime organ at fault. had a full share of attention in the way of emmenagogues, astringents, caustics & injections without relief at last the it was determined by one of the Physicians it been the real cause of the evil, of course they found it - abraded & inflamed from the effects of acid expectorants &c. if not originally so. The strength of the muscles was increased. The patient given up, she was advised to travel & visit watering places. She also put herself under the care

of several very eminent medical advisers, and at length returned home with all her former symptoms and in addition an "Confirmed Neuralgia of the Inferior Maxillary Nerve" for which she was treated with arsenic, 20 gr doses of Quinine, Iron with the injection and in hope Homopathy. I was called to her in the fall of 53 to do something with her teeth and on examining them & inquiring into the history of her case was fully convinced that they were the cause of all her maladies, instead of a neuralgia I found a sinous ulcer in front of the two incisor teeth, which was sound, but the bicuspid & Molars of that side was very much diseased & the second Bicuspid was dead & painful on being pressed upon showing the origin of the "Neuralgia". I removed some of the worst teeth, filled the others, cleaned of the tartar which was very abundant & offensive, promising me that we would meet in a month, instead by the operation and I was not disappointed, the "neuralgia" left immediately, all the other symptoms

informed gratuitously on a train since I left home that she had promoted her happy husband with a responsibility of 11 children in eight years & this at a little with eight they had been married several years.

But it is not necessary to enumerate any more of those cases, every dental writer has recorded numbers of them similar to the above and Dental Practitioners are frequently brought in Contact with them. & I hope the time will soon come when the teeth & their diseases will take its proper Stand in Etiology & that it will be looked for by the Medical attendant in all those cases of Cerebralgia, Dyspepsia &c. &c. where it is possible for it to be an exciting or predisposing Cause of the Malady.

N.E. Cooke M.D.

An
Inaugural Dissertation
On
Peritonitis
Submitted for Examination

To the

Provost, Regents & Faculty of Medicine

Of the

University of Maryland

For the

Degree of Doctor of Medicine

By

Florence O'Donoghue

Georgetown. D.C.

Having selected Peritonitis as the subject of my thesis, I think it would not be amiss, before entering fully upon it, to give a brief sketch of the anatomy of the Peritoneum and of the manner in which it gives protection to the alimentary canal.

The Peritoneum is a thin, serous membrane consequently a closed sac, lining the cavity of the abdomen and reflected over all the organs contained within. Owing to its many reflections, it forms ligaments which serve the purpose of maintaining each viscus in its proper position. When in a healthy condition it secretes a thin fluid, which together with its smooth internal surface, allows free motion to the viscera, one upon the other and gives increased facility to the peristaltic action of the bowels.

The Omenta of which there are four principal, namely, the gastro hepatic, gastro splenic, the colic-omentum, and the gastro colic consist of two layers and are so called when a portion of the peritoneum passes

between one viscus and another or from a viscus and the wall of the abdomen. The first named reaches from the lesser curvature of the stomach to the liver, the second, from the stomach to the spleen, the third, holds the large intestine to the posterior wall of the abdomen and the last named passes between the stomach and the colon. This is the largest and covers the whole of the intestines. The entire surface may be traced in man, but in woman the cavity communicates externally through the Fallopian tubes.

The mesentery, composed of two folds of peritoneum connects the small intestines with the walls of the abdomen.

Thus it will be seen that the peritoneum plays an important part in protecting the viscera. A membrane so complicated in its reflections, when in a diseased condition becomes an object of great interest to the practitioner and calls for his most watchful and anxious care.

Inflammation of the peritoneum may be

divided into many varieties, but we shall treat of it chiefly under the two forms of Acute and Chronic, this being the most usual as well as the most convenient mode of considering it.

Acute peritonitis is generally ushered in by a chill, or by pain. Sometimes they are simultaneous in their onset. The inflammation usually begins in one spot and extends by continuity of surface, so as soon to occupy the whole membrane. As in inflammation of all serous membranes, so in the peritoneum a fluid is effused, which distends the cavity or forms adhesions between the opposing surfaces.

The contraction of the muscles of the abdomen, vomiting, defecation a deep inspiration, and movements of the body, all give rise to pain. The pain is sharp and much increased on pressure. The patient cannot even bear the weight of the bed-clothes. The supine position, with knees drawn up is usually selected, being that in which

the greatest ease is obtained. Fever is present. The breathing is quick and owing to the pressure of the diaphragm on the peritoneum respiration is carried on by means of the ribs. The abdomen is swollen, generally smooth but occasionally giving the sensation of tumors. On percussion the resonance is healthy, but as the disease advances we perceive the friction sound owing to the rubbing together of the opposing surfaces, which have been roughened by the effused coagulable lymph. There are other symptoms, which though sometimes absent occasionally present themselves. Nausea, vomiting, thirst, constipation and scanty or suppressed urine are frequently present. The face is pale and pinched, pulse, frequent, small and tense, from 110 to 180 in a minute.

When the disease is at its height, the temperature of the surface is but little warmer than in health. Peritonitis is usually very rapid in its course. In some fatal cases death occurs in twenty

four hours, but generally in about a week sometimes, however, the disease runs through three or even four weeks, its progress being evinced by an increased intensity of all the symptoms. As death approaches the pain often subsides and this is a most unfavorable sign when all the other symptoms except this, continue unabated. The pulse is now exceedingly frequent and feeble and the extremities often cold and livid. Hic-cough often occurs and a pure or blackish matter is sometimes vomited, and a similar matter is passed per anum. Coma or convulsions frequently precede death. When pain, tenderness the swelling of the abdomen and vomiting gradually subside, when the pulse becomes less frequent and the countenance more natural a favorable termination is indicated.

When the disease is about to subside, the secreting organs occasionally take an increased action. In some cases recovery is perfect, in others pain and

tenderness in the abdomen continue after danger is passed. The acute may run into the chronic form and render the result distant and uncertain. The pus secreted during the inflammation sometimes makes its way into the stomach, intestines or bladder or to the surf. of the body. In these cases recovery occasionally takes place.

There are various varieties of peritonitis. It may be local as when the disease proceeds from some mechanical violence or an inflamed invested organ. The inflammation in these cases does not extend beyond the membrane opposed. The symptoms are less violent than in the form previously described. The viscera inflamed may be diagnosed from the seat of pain. The inflammation is local when it depends on strangulation of the bowel produced either by hernia or intussusception. In these cases symptoms of obstruction are added. Local inflammation may become general and thus increase the danger. Peritonitis though most

generally painful yet is sometimes insidious in its approaches and may even run its course without being suspected. Auscultation aids us much in the diagnosis of doubtful cases. Like other inflammations, peritonitis occasionally assumes an adynamic type, presenting all the phenomena of that condition. It frequently results from the perforation of some viscus. The incipient stage is recognised by a sudden accession of pain, without previous chill, commencing in one point and rapidly extending over the abdomen. The most violent symptoms are soon developed. This form of the malady is usually fatal.

But of all the forms under which this disease may occur none are so distressing as that denominated Puerperal Peritonitis. It usually attacks women in childbed within three or four days after delivery, but it is occasionally much sooner in its onset. The pain sometimes comes on suddenly or it may be gradual,

in its approach. Frequently it is confounded with after pains. The uterine region is that first attacked, but soon the whole abdomen becomes involved and presents symptoms of great suffering and prostration. Coma and delirium frequently attend this form of the disease. Pulse rapid and feeble. Cold sweat, tongue dry and presenting a brown appearance, sordes about the teeth, abdomen tympanitic, vomiting of black matter are symptoms of this variety. This dreadful malady has been, I believe, proved to depend on epidemic influences, and is supposed to be nearly allied to Erysipelas. Whenever it occurs it is always a matter of great moment to the practitioner and frequently defies his best directed efforts.

The appearances after death are such as are usually presented after inflammations of serous membranes. If the disease has been rapid in its course we may detect only redness. If on the contrary it has been slow we

percent a fibrinous exudation on the surface and an effused liquid in the cavity. This is sometimes found. False membranes are formed. We are often able to determine which organ has been the seat of inflammation that is, when the disease depends on perforation, by the character of the contained fluid. In the adynamic form and in puerperal peritonitis the fibrinous exudation is scanty, the effusion being of a serous or bloody character with some coagulable lymph adhering in patches to the membrane.

The causes of peritonitis are sometimes those which produce ordinary inflammations. It frequently arises however from vicissitudes of weather, excessive use of a stimulating diet and suppression of habitual discharges. It is caused moreover by falls, blows and bruises and frequently arises as a result of the surgical operations of tapping in dropsy and that for strangulated hernia. Inflammation of the

uterus, whether idiopathic or arising from injuries received in parturition frequently give rise to peritonitis. Perforation of the alimentary canal or any of the hollow viscera. Foreign bodies lodged in the caecum or appendix vermiformis by causing ulceration and perforation may also be regarded as frequent causes of this disease. It may also arise in the course of other diseases, especially in those of a low febrile type. Puerperal peritonitis in many instances arises from the inflammation extending by the veins and absorbents of the uterus to its peritoneal investment. It may also arise from ordinary causes or be produced by contagion.

There is but little difficulty in the diagnosis of this disease when it is well developed and free from complication. From colic it is distinguished by the increase of pain on pressure, by its being more continual and less paroxysmal and by the position the patient assumes

The dorsal decubitus with legs drawn up, is that most frequently assumed as it allows great freedom from pressure, and consequently lessens the pain. From gastritis and enteritis it may be recognised by the tenderness and sharpness of the pain, the tendency to constipation, the frequent pulse and the anxious countenance. In fact the great diagnostic marks between this and all other diseases of the abdomen consist in the extreme tenderness, on pressure the sharp character of the pain and the expression of the countenance and the tendency to constipation. It is generally difficult to diagnose between the inflammation of the peritoneal investment and the substance of the organ because the functions of the organ are more or less deranged when the investing membrane is inflamed and because they are often inflamed at the same time. It is of little import, however, since the treatment required is the same. From Hysteria it may be distinguished by the

character of the pain, the ease with which the position may be changed in that disease and also from the copious quantity of the urine. The friction sound under auscultation may be looked upon as pathognomonic of peritonitis.

The antiphlogistic is that required in the treatment of peritonitis. Blood-letting and Mercury must be employed vigorously and from the commencement of the attack. A moment lost may be irretrievable. The pulse should not be the guide in the use of venesection, for it is often feeble before we commence but under the influence of our remedy it becomes soft and fully developed. We should bleed the patient almost to syncope and then employ local blood-letting. Owing to the tender state of the abdomen the use of cups is out of the question. From fifty to a hundred leeches should be placed on the abdomen. It will often be required to repeat the blood letting.

a light poultice or flannels wrung out of hot water should be laid over the abdomen after the leeches have been taken off, in order to facilitate the bleeding from the bites and to add to the patient's comfort. In conjunction with blood-letting, Calomel should be used for its constitutional effect. It is desirable to produce ptyalism as soon as possible and to this end it should be given in small doses combined with Opium and frequently repeated. This object may be more quickly accomplished by inunction. The Ung: Hydrg: may be rubbed on the inside of the limbs or may be applied as a dressing to the blistered surface. In the course of the disease the abdomen should be rubbed with stimulant lotions, or blisters should be applied large enough to cover the whole surface. Emetics and Anti emetics may also be employed. The diet should also be of the lightest kind such as gruel, barley water &c. &c. Towards the end of the disease tonics and

stimulants may become necessary. The patient should be kept in a state of perfect quietude. To remove constipation a large dose of Calomel should be given early followed by a dose of oil or some saline cathartic or by enemata.

The treatment of peritonitis resulting from perforation differs from that described above. We are rarely successful, however, in treating the form of the disease. In such cases, Opium is our sheet anchor. It is to be given in large doses in order to keep the bowels in a state of perfect rest, so that adhesions may be formed and thus preserve the continuity of the canal.

In the treatment of the puerperal form, some employ the same remedies as in the ordinary. They make it, however, more active. Others considering the connection between it and Erysipelas employ a tonic and stimulant plan from the first. This mode of treating

the disease has been very successful.

Chronic Peritonitis may be the result of an acute attack arising from ordinary causes or may depend on tubercles deposited in the peritoneum. The last named is the most dangerous and with difficulty if ever yields to treatment. The symptoms of the chronic form are less intelligible than are those of the acute and it is somewhat insidious in its approaches. Pain, slight but permanent, a sensation of fullness without any apparent increase in size, bowels irregular, loss of appetite, nausea and vomiting are the usual symptoms. Sometimes, however the function of digestion is normally performed. As the disease proceeds the abdomen swells and fluctuation is easily perceived. During its course more or less fever is present. Emaciation and debility keep pace with its progress. The countenance is expressive of great languor and debility.

After death we find the mesenteric glands swollen and indurated & the whole membrane is thickly studded with great numbers of small granules. False membranes are formed; the intestines form adhesions. These are the principal morbid appearances.

The treatment we employ, however good, will scarcely do more than mitigate the symptoms. Local blood letting, followed by emollient cataplasms, together with blisters when the pain and tenderness are not severe, and mild cathartics should be used. The diet should be light but of a nutritious character. Frictions over the abdomen with Iodine Ointment has been strongly recommended. Cod-liver oil may be employed for its known anti-scrofulous and tonic effects. Such is the most approved plan of treating the chronic form of this disease but importunately even with this our success is only partial

An

Inaugural Dissertation

on the

Medical and Toxicological effects of Strychnia

upon the human system.

Submitted to the examination

of the

Prof. Regents and Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine.

By

Finlay Grant Smith

of

Maryland.

To the

Distinguished Professors, Scholars and Honorable

Gentlemen

of the

University of Maryland,

With my most grateful acknowledgements for the education which I have derived from their instructions, this Thesis is dedicated by the

Author.

Among the innumerable acquisitions which the human mind, that "highest display of the power and skill of the Infinite Mind," is susceptible of obtaining; there is no one of a more delightful, exalted, and invaluable character than that of Knowledge. In taking a retrospective view of the period which has elapsed since the formation of the intellectual power in man, ay ever since the first moment that vital breath was given to the clay of Eden, we rejoice to report, that in every age to which we have had access we discover, that there have flourished men, who have been assiduously endeavoring to obtain this pearl of inestimable value. It matters not, whether we behold the aged man, or youth; the former bending under the weights of accumulated years, sipping at the Pierian spring, attempting to improve, & cultivate his immortal mind, that man derives happiness and pleasure which no one knows but he himself:- well, if this instructing to the man of threescore years and ten, he whose head is already besilvered, with the

frosts of many years; how much more so must it be to the youthful student, to whom every thing is novelty. To day it is his privilege to converse with Shakspeare, with Byron, with Burns: tomorrow he may peruse, with pleasure the works of old Homer, Ossian, and Milton:- And if he be a student of Medicine, to day he may meditate upon the great Hippocrates, Hunter, and Galen tomorrow; if of this College, he may call to his recollections, with sensations of the most delightful character, the learned Professors of the University of Maryland. So that day after day, he may revel in the fields of science, culling the sweet flowers which strew his pathway to Mt. Parnassus. Thus it is seen exhibited that the advantages of literature are many and various. It not only affords happiness and pleasure to its possessor but, by his exertions, hundreds, and thousands of aspiring pupils are greatly assisted in ascending the arduous hill of science. It will be admitted that this is the fact, since by it the great storehouse of Knowledge is unlocked, and the innumerable and diversified Arts and Sciences therein con-

tained, expounded and made manifest: Among which the Science of Medicine, which has for its object the preservation of health, and the mitigations of the many physical ills to which mortals are subject; is one of the most ennobling. It brings to the notice of him, who embraces it as a profession, the marvellous construction of man's physical frame, which cannot fail to excite increasing wonder and admiration, the more thoroughly it is investigated. When practiced upon philanthropic principles it is unacquainted with national variances, political disputes, and sectarian dissensions. Disease and pain being the sole conditions of its ministry, it asks not whether its client be of high, or low descent; whether he occupy the stately mansion or the lowly hut; whether he be religious, or non-religious, but to suffering humanity of every rank, whether from the Alpine regions, or the scorching sun of the torrid clime, to all, half it dispenses its peculiar benefits, with relenting compassion. Wishing myself to become a worthy disciple of the Father of Medicine, and,

desiring to obtain the requisite amount of Knowledge to enable me to stand unmoved, unagitated, in the Thermopylae of medical history that is coming: and now being favored, with an opportunity of contemplating upon one of its most potent remedies: the medical and toxicological effects of Strychnia ~~advances~~ upon the human system advances itself, and is chosen, to be the soul-inspiring theme for our present contemplations. I have not chosen this subject, because I deem myself an individual of sufficient condition to fathom its lowest depths, No: not at all - but 1st. Because it has already called forth the soundest reflections of some of the most distinguished Therapeutists that ever adorned the medical World: and 2nd. Because every medical man should endeavor to make himself an adept in a subject upon which so many stupendous hypothesis have been given.

Whether we view Strychnia as a medicine or as a poison, we are compelled to acknowledge it to be an agent capable of exerting gigantic effects over man's bodily fabric.

Employed as the former, it possesses great certainty and uniformity of action; as the latter it is one of the most virulent poisons hitherto discovered, or yet mentioned, in the catalogue of Toxicologists.

Strychnia was discovered in 1818 by M. M. Pelletier and Caventou in the fruit of Strychnos Nux Vomica, S. Ignatia, S. Colubrina, and S. Tieuté. In these plants it exists frequently with Brucia and always with an acid. The U. S. Pharmacopoea orders it to be made after the following process. Take of Nux Vomica, rasped, 1 lb; Lime in powder, ℥ vi; Muriatic Acid f ℥ iii; Alcohol; Diluted Sulphuric Acid, Solution of Ammonia, Purified Animal Charcoal, Water, each a sufficient quantity. Digest the Nux Vomica, in two gallons of water, acidulated with a fluid ounce of the Muriatic Acid for 24 hours; then boil for 2 hours, and strain, with expression through a strong linen bag. Boil the residuum twice successively in the same quantity, of acidulated water, each time straining as before. Mix the decoctions and evaporate to the consistence of thin syrup;

then add the lime previously mixed with a pint of water, and boil for ten minutes frequently stirring. Pour the mixture into a double linen bag, and having washed the precipitate well with water press dry and powder it. Treat the powder repeatedly with boiling alcohol until deprived of its bitterness; mix the liquors and distil off the alcohol by means of the water bath. Mix the residue with water and having applied heat, drop in sufficient diluted Sulphuric Acid to neutralize and dissolve the Strychnia; then add Purified animal charcoal boil for a few minutes filter evaporate and crystallize. Dissolve the crystals in water and add sufficient Solution of Ammonia to precipitate the Strychnia Lastly dry the precipitate on bibulous paper.
Strychnia when perfectly pure is a white inodorous, intensely bitter, crystalline substance; the form of the crystals being that of elongated octohedra with quadrilateral terminations.
It is almost insoluble in water requiring 6667 parts of water at 50° that is one grain needs

nearly fourteen ounces to hold it in solution and 2500 parts at 212°. So intense is its bitterness, that one part is said to communicate a sensible taste to 600.000 parts of water.
Boiling officinal alcohol dissolves it without difficulty. In absolute alcohol, and Ether, it is very sparingly soluble. The volatile oils dissolve it freely. Strychnia is recognized by its crystallizibility; its extreme bitterness, its alkaline properties, and its difficult solubility in alcohol, Ether, and water; and solubility in dilute acids.

Physiological Effects.

Strychnia produces effects analagous to those of Nux Vomica, but much more violent in degree. As ordinarily met with it is about six times as active as the alcoholic extract of Nux Vomica. Administered in very small and frequently repeated doses, it increases the appetite; and acts as a tonic to the digestive organs; augments the secretion of urine, and renders the excretion of that fluid more frequent. If given in rather larger doses the stomach not unfrequently

becomes disordered, and the appetite impaired. The pulse is generally unaffected. If now it be given in still larger doses, so as to bring the system decidedly under its influence, its effects are manifested by a disordered state of the muscular system, through the medium of the spinal marrow. There exists at the same time an increased sensibility to external impressions, (of light, sound, touch, and variations of temperature.) The limbs tremble and slight rigidity is experienced, when its victim attempts to bring the muscles into requisition. The patient finds it difficult to stand erect, and, in walking frequently staggers. If, when this effect is beginning to be observed, he be tapped suddenly on the ham, a slight convulsive paroxysm is brought on, so that he will scarcely be able to maintain his equilibrium. Pereira says he has often been able in this way to recognise the effects of strychnia before the patient has experienced any particular symptoms. If the employment of the medicine

be still persisted in these effects increase in severity. Whereas before the tetanic spasms were induced by some exciting cause, they now occur without any extraneous agency. The muscular fibres of the Pharynx, Larynx, Oesophagus, and bladder also become affected. The pulse is not materially affected, tho' sometimes it is increased in frequency during the convulsive attacks. Previous to the production of muscular rigidity, various painful sensations are produced, which those who have realized them, have compared to the creeping of insects. Lastly we have tetanus, asphyxia, and death; which will be described when its toxical properties are spoken of.

Modus Operandi

Strychnia acts as a local irritant. Applied to the skin it produces pungent pain, lasting from half an hour to an hour, and when blisters have been applied the raw surface inflames and affords a copious suppuration. Strychnia now generally admitted to be absorbed and proved by the fact that if the blood of an

animal under its influence be injected into the veins of another, analagous symptoms will be produced. The tetanic convulsions and the absence of narcotism have led Therapeutists to infer that the spinal cord was the part principally affected, an inference supported by the fact that division of the cord does not prevent the peculiar effects of strychnia; so that the intervention of the brain is not requisite to its action. And again, if only part of the cord be destroyed, the convulsions cease in those portions of the body only which are supplied with nerves from the medulla destroyed.

But does it not act upon the cerebrum? This we think is manifest since it increases the susceptibility to external impressions, and so it renders all the senses more acute except the sense of smell, which it exerts no special influence upon. Notwithstanding the intellectual powers are not markedly deranged; yet the occasional appearance of stupor unequivocally proves that the Cerebrum is moderately affected. As the Cerebellum affected?—

This, we think very probable, since the sexual desires & feelings are aroused by its use.
M. M. Orfila has observed that this portion of the brain presented more evidence of lesions than any other parts of the nervous system.
What are the indications for the employment of Strychnia?
It is of indispensable importance both for the welfare of the patient and the reputation of the Practitioner, that this potent agent be administered with judgment and precision; remembering never to give it in any case, whatever depending on inflammation or organic lesions = as of the brain, spinal Marrow &c. until the removal of the primary affection.
In what diseases is it beneficially employed.
Among the diseases for the relief of which Strychnia has been employed, there are none in which it has been given with more encouraging success than in Paralysis.
Yet, notwithstanding it is of inestimable

importance in certain forms of this malady yet if the cases be improperly treated or wrongly diagnosed it may be productive of alarming and disastrous consequences. That a remedy which stimulates so remarkably the muscular system to action, should be serviceable when that system no longer receives its accustomed stimulus is a priori not astonishing. When blood has been poured out in a cell, and remains some time before it is absorbed, of course it prevents the affected organ from performing its assigned functions with as great activity as formerly. To illustrate this = A man has a fractured limb, having to remain in a state of repose for a considerable period of time, the power over the muscles by long disuse becomes gradually diminished, and it appears that occasionally in cerebral hemorrhage after the absorption of the effused blood the paralysis remains. In cases of the stump the cautious employment of Strychnine is frequently attended with beneficial results.

When then the parts, lack motion and sensation, not depending upon any organic lesion Strychnia, may be considered, the standard remedy.

Paralysis of the sensorial nerves, characterized by torpor and inactivity, may be greatly mitigated and frequently restored to their normal vigor, by the cautious administration of small doses of Strychnia. This influence may be physiologically drawn since by the employment of this article, the susceptibility to external impressions, is greatly exalted and increased. It has also been used with gratifying success, in the following diseases, Intermittents; Dyspepsia, Pyrosis, Gastrodynia, Colica Pictonum, Worms, Mania, Rheumatism, Hypochondriasis, Hydrophobia, Dysentery, and Diarrhœa, Indicated in these last two diseases, when all inflammatory symptoms have subsided, and the evacuations are white albuminoid and glutty. It has achieved more triumphs in paraplegia than in hemiplegia = owing to the fact

that hemiplegia depends upon, or is produced by disease of the brain, whereas paraplegia is usually the result of disorder of the spinal marrow, and that in the latter the Medicine has a larger field, to exert its beneficial influence upon. It has frequently effected cures in functional disease of the bladder induced by over distension of the bladder, incontinence of urine from paralysis of the sphincter, Amaurosis and other cases of partial palsy, and has been given with asserted success in prolapsus Ani, Spermatorrhoea, and Impotence. Upon the same principles it enjoys the merit of proving useful in obstinate constipation resulting from deficient muscular contractility. Recently it has been recommended in Chorea, Neuralgia, and Epilepsy. Dose. The most judicious mode is always to commence administering it in small doses, gradually increased till its effects are observed. From 1/12 to 1/6 of a grain internally and externally sprinkled

upon blistered surfaces, from 1/40 to 1/20 of a grain morning & night cautiously increasing.
Internally better given in the form of pill from its excessive bitterness (made with conserve of roses) or it may be dissolved with alcohol or acetic acid. The medium dose of Strychnia should not exceed at the commencement 1/20 grain & of its salts 1/40 to 1/20 grain.

Toxicological Properties. Strychnia in an overdose, administered internally or applied externally acts with very great energy and generally destroys life in a very short time. It has a specific action on the spinal marrow producing tetanus and convulsions, but rarely coma or delirium.

Symptoms. In from five to twenty minutes after it has been swallowed, the patient is suddenly seized with tetanic spasms affecting the whole of the muscular system; the body becoming rigid, the limbs stretched out, and the jaws so fixed that considerable difficulty is experienced in introducing

anything into the mouth. The muscles of the chest are also fixed by spasmodic contraction, and the body assumes the state of opisthotonos. The intellectual faculties are clear. This spasmodic state ceases, but after a short interval reappears, and the chest so fixed as to give a sense of impending suffocation. After several such attacks the unfortunate victim dies asphyxiated. Death supposed to take place from a suspension of respiration resulting from a spasmodic condition of the muscles concerned in the process. Vomiting and a feeling of general illness have sometimes preceded the attack, vomiting, pain in the abdomen, and the symptoms of irritation have been occasionally evidenced, when the case was protracted; but in general death comes to the relief of the patient long before any such symptoms are manifested. The quantity required to destroy life is very small. The smallest fatal dose was the case of Dr. Warren, who died from the effects of half a grain. Sulphuric Ether in a few minutes.

Some individuals are however more susceptible to its impressions than others. Anna has seen a single pill containing 1/12 of a gr. cause tremors, and the commencement of tetanic spasms, while in other cases the dose may be gradually increased beyond a grain with comparatively little effects. Prof. Webster who killed Dr. Parkman of Boston knowing that he was to be imprisoned and tried for his life, swallowed three grains of strychnia which scarcely affected him at all; probably owing to some idiosyncrasy, assisted by the tremendous excitement under which he labored. In this case no antidote was given for it was not known that he had taken the poison until six months after, when he divulged it himself.

TESTS FOR STRYCHNIA, are contained in the peroxide of lead, and a mixture containing 2 parts of SO_3 to 1 part of HO. The salts of strychnia assume a violet color passing into a light rose a dark rose and a red. This is a characteristic reaction and should

be tried only when the salts of Strychnia is found in the matter.

Perchloride of Gold gives a light yellow precipitate. Potassio iodide gives a yellow precipitate.

In order to extract Strychnia from organic matter it was formerly the custom to use pure Acetic acid which greatly dissolves the tissues as well as the Strychnia. The latter would be in solution in Acetic. The mixture should then be evaporated to dryness, treated with alcohol; evaporate the Alcoholic extract to the consistence of an Extract, on which the reagents could be tried. Nitric acid gives a very pretty red with commercial strychnia because it contains Bromine. Orfila's Process.

Since Strychnia and Brucine are not decomposed at 212°, Flandin proposes to use a drying time (12 parts to the hundred) to matter, to expose the suspected matter then to this heat. A perfumed material will be obtained which will hardly afford a colored solution to absolute Alcohol. The solution is rapidly filtered.

evaporated, and its residue treated with ether in order to remove fatty matter. There are two kinds of Strychnia and Brucia remaining by themselves undissolved, or they will be mixed with some foreign matters. In the first case the special reagents will indicate their presence; in the second, the solid matter are moistened with acetic acid, allowed to dry in a salt bath, and then dissolved in water which will remove the two alkaloids or acetates which can then be detected by the reagents.

Flandin's Toxicologie, vol. 3

Physiological action according to Flandin.

The poison does not act immediately or directly on the nervous system; it penetrates the vessels by absorption. It poisons the blood instantaneously, and the blood is the aliment, the essential excitant to the nervous system.

Antidote

Evacuate the stomach as speedily as possible. No chemical antidote is known. Probably astringent infusions (as those of galls, green tea &c) would be serviceable. Some regard Chlorine,

Iodine and Bromine as antidotes, but further evidence is necessary to establish the truth of this assertion. To relieve the spasms narcotics have been employed as Opium. As caninum is the counterpart of Strychnia it deserves a trial. Pereira applied it to the wound in a rabbit affected with tetanus from the use of Strychnia, the convulsions ceased but the animal died. In the absence of Coma, Hemlock should be employed. Ether and the oil of Turpentine have been resorted to. To relieve the excessive endemic operation of Strychnia Acetate of Morphia has given relief. Camphor has been recommended by some of the French authors. Having carefully perused Dr. Pereira's article on Strychnia and having paid particular attention to the Lecture which Prof. Miltenberger devoted to it; it would be ungrateful in me to conclude, without returning those gentlemen my most unfeigned thanks.

An

Inaugral Dissertation

On

Bright's Disease

To The

Provost, Regents and Faculty

of Medicine

Of the University of Maryland

For the Degree

Of Doctor of Medicine

By

Lewis Holmes

[illegible]

[illegible]

[illegible] synonyms. Granular Degeneration, Albuminuria, Albuminous Nephritis

[illegible] the above are [illegible] and under which name it has been written about [illegible]

By this I do not mean to convey the idea that the disease, as now known, may not have afflicted man since his creation, but simply to express my belief that the region of authority is against those who would have us believe that, even in the days of Hippocrates, this disease was recognized, its etiology & pathology comprehended.

In the beginning of the present century, two [illegible], Blackall & Bright, discovered that in a large proportion of the cases of dropsy that came under their observation [illegible] urine, dropsy, and the pathological condition of the [illegible] they are associated.

This discovery was the cause of a most diligent study being made of the intimate nature of the disease, [illegible]

contributed some noble productions to medical literature.

I shall in a cursory manner glance at the anatomical structure and physiological functions of the organs which I consider a proper introduction to that disease which I propose speaking, since under its effects notable changes are produced, both in their structure and functions.

The Kidneys are situated in the lumbar region, and are behind the peritoneum on either side of the lumbar vertebrae [illegible] quadratus lumborum muscle, and Psoas magnus. Anterior right is in relation with the liver, descending duodenum and ascending colon: the left, which is higher than the right, is in relation with the greater extremity of the stomach, spleen and descending colon. The anterior surface is convex, while the posterior is flat [illegible] the vertebral column [illegible] the internal, looking towards the vertebral column [illegible] inches, two and a half inches; in thickness a little more than [illegible]

[illegible]

in the liver but is readily distinguished from the organ.

In order to examine the internal structures an incision should be made in a plane with the long diameters from the convex to the concave border; you will [illegible] and also the kidney.

[illegible] portion [illegible] under the investing capsule, having prolongations extending into the medullary portion; it is about [illegible] inch [illegible] the cortical is composed of the convolutions of blood vessels and the arteriolas and venal [illegible] of the tubuli uriniferi.

The medullary or tubular portion, consists of cones, whose bases are in contact with the cortex while the apices [illegible] [illegible]

lined with a mucous membrane covered with an epithelium: the cells composing the epithelium of the cortex [illegible] epithelium: in form, they are spheroidal, covering the basement membrane with a single layer occupying about one half of the diameter of the tube: they are also granular and opaque appearing to contain a considerable quantity of solid matter: their walls are extremely delicate: they have [illegible] the lamelliform or pavement variety: they are flat, occupying less of the tube's diameter, are not granular have more [illegible] to the basement membrane, and consequently not so easily detached as the others.

[illegible] might have inferred a priori this difference [illegible] is found on microscopical examination to be connected with a difference of function.

[illegible] tubes, and the arterial and venous capillary systems lying [illegible]

in the vortex the vascular terminations of the uriniferous tubes [illegible] enclose tufts of convoluted vessels containing arterial blood: that these tufts lie loose in their capsules, are not pressed [illegible] the walls of the capsules, but that on the contrary [illegible] engage the capsules were an epithelium covered with vibratile cilia which aid the flow into the the uriniferous tubes of the liquid exuded into the capsules.

Division. However various the hypotheses which from time to time have been elaborated with reference to the functions of the minute portions of the kidney there now exists a coincidence of opinion [illegible] of the following: that the cortical is the secreting, while the medullary is the excreting portion. This conclusion is drawn from the anatomical relations of the two parts: [illegible] the [illegible] of certain solid constituents, whose protracted residence therein would prove [illegible] the system [illegible] inspiration [illegible] to well [illegible] to perform the [illegible] [illegible] blood [illegible] indeed [illegible] to [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

[illegible] is retarded [illegible] absorption
blood to its circulation and [illegible] the fluids of the blood
are secreted: the remainder is then conveyed [illegible] the
efferent vessels to the venous portion of this plexus of
capillaries, which surround the tubuli uriniferi, and here
[illegible] portion is [illegible].

The Kidneys as we have seen, form their secretion from blood derived immediately from the arterial system: moreover this secretion is excretive without subser-
[illegible] other purpose in the animal economy. In
[illegible] of these respects, the liver [illegible]
elaborates its bile from venous blood derived from the vessels of the chylopoietic viscera and the bile is also
disposed [illegible] in one of its most important functions, by depositing the substance of the faeces, [illegible] are with the urine.

Morbid Anatomy. Almost every author who has written [illegible] has made a different division of the
post-mortem lesions: in truth the line of demarcation
[illegible] to [illegible]
[illegible] of the conditions of the organs on which they
are dependent exist in one or more of the successive
[illegible]

The arrangement of [illegible] appears [illegible] the [illegible] [illegible] in [illegible] not present in the [illegible] ing one. [illegible] its [illegible] in an [illegible] [illegible] to two or three times its normal average: the colour is a bright red being greatly engorged with blood: minute points of still deeper red are visible scattered over the ex- ternal surface [illegible] [illegible] [illegible] [illegible] [illegible] tubes of the cortical portion with the same evidences of engorgement as were remarked externally: the medullary [illegible] [illegible].

[illegible] second [illegible] [illegible] and injection of tissue as the first but is distinguished therefrom by the superadded phenomenon of a pale yellow [illegible] [illegible] [illegible]

The third stage is recognised by [illegible]

[illegible] of the cortical substance, the medulla remaining as in the second.

In the fourth stage there is superadded to the [illegible] some foreign matter [illegible] therefore surrounds and defines it. These granulations are found on stri[illegible] the surface [illegible] they are distinct, the size of a mustard seed, at times they are found in aggregated patches. They are also deposited in the internal structure, particularly of the cortex and are developed at the expense of the natural structure [illegible] foreign matter [illegible] deposited in [illegible] becoming absorbed gives the organ the tuberculated appearance which characterises the malady.

The fifth stage is variable [illegible] either more voluminous [illegible] than natural [illegible] the [illegible] absorption [illegible]

[illegible] in consequence of the pressure of the foreign deposit, and [illegible] leaving the walls of the Kidneys thin, but indurated, and [illegible] more a membranous sac, than [illegible] organ.

The preceding lesions in their different varieties are never limited to one Kidney, but are common [illegible] have advanced equally in both.

[illegible] Abdomen, as also those of the Thorax reveals almost [illegible] [illegible] most common and in relation to frequency in the [illegible]

[illegible] 27 [illegible] heart: 52 had hypertrophy of this organ which was undoubtedly due in a great measure to the anemic condition. [illegible] disease in it is a well established pathological fact. Dropsies [illegible] due to cardiac affection are particularly supervening.

Ascites, Hydrothorax, Hydropericardium [illegible] concomitants, [illegible] induce inflammation of these serous sacs, either by [illegible] serum acting as an irritant, or because this serum contains substances in solution which normally (experimentally) are peculiarly obnoxious to these membranes.

Nature. [illegible] Medullary epithelium. These constituting the [illegible]

[illegible] nature [illegible]

[illegible] adopt Virchow's [illegible]

structural change is in those secreting cells, which in their normal condition eliminate from the blood those excrementitious substances viz: urea, uric acid etc

[illegible] in consequence of some morbid influence acting upon them cease to do so: this morbid influence consists in a malevolent Morbi either developed within the [illegible] or introduced from without, and it is in consequence [illegible] being unnatural is therefore injurious if permitted [illegible]

[illegible] modified in a partly [illegible] to [illegible] other [illegible] conditions [illegible] other [illegible]

[illegible] is no more plausible hypothesis for although we [illegible] not be able to [illegible] that a cell possessing certain physiological properties must [illegible] instance the liver and kidneys, that the ultimate

cells, or those portions to which we ascribe the function of secretion, are so different in their constituents as in the products of their secretions.

In chronic jaundice, where the bile fails to be excreted by its natural channels [illegible] to a certain extent its removal, but in so doing the secreting cells undergo marked modifications, becoming tinged with the biliary colouring matter and [illegible] their vital force invalidated by this abnormal function, and passing out with the [illegible] [illegible] cells [illegible] its characteristic colouring. This same fact presents itself in tissues, but in both of these we [illegible] that the cells in the [illegible] [illegible] materies morbi and we find as a consequence of their modification [illegible] of epithelial cells in the urine, [illegible] are in their normal state: may we not then [illegible] we find the cells in [illegible] [illegible] of the above mentioned diseases, that, as in these cases their presence is due to their having undergone

[illegible] modification [illegible] and that this modification was ~~ultimate~~ with a view of eliminating abnormal materials from the blood? [illegible]

[illegible]

[illegible] the change in structure & function of the cells [illegible] a change in the character of the blood; for although [illegible] cells [illegible] to eliminate the materies morbi developed within or introduced into the blood, yet in the very acquisition of this latter power they lose their original function and [illegible] experimentations parts. The process of secretion is now stopped and that for two reasons: 1st while undergoing modification the cells are incapable of their accustomed [illegible] and perfect secretion: 2d the disintegration and subsequent accumulation in the tubes of the cells which [illegible]

[illegible] to the cessation of secretion is the [illegible] or larger pari passu. It is the intercellular plexus of blood vessels which experiences first the results

[illegible] pathological alteration [illegible]
circulation is first retarded and then in the vessels
[illegible] the [illegible] of the circulation [illegible]
[illegible] which [illegible]
[illegible] bodies [illegible]
[illegible] passage through the [illegible]
[illegible] and [illegible]
[illegible] extensively [illegible]
coagulating in the tubes, and entangling desquamated epithelial cells [illegible] into the urine constituting the casts [illegible]

Some of the Malpighian bodies become so distended as to rupture their coats and thus give exit to the blood, some of the corpuscles of which are also found [illegible] the remainder [illegible] the tubes and [illegible] the urine in certain stages of this disease. As a consequence of this retardation of circulation, the kidneys become very great [illegible] [illegible] found in the last stages [illegible] cases the [illegible]

[illegible] with the development of new epithelial cells, finally [illegible] the tubes have [illegible] since it is by the action of the epithelial

cells that the secretion is formed and the circulation [illegible]
[illegible] and [illegible]
is a natural result.

The materials found in the tubes (according to G. Johnson) are: 1st Albumen and Fibrin in an unorganized state: 2d Pel[illegible]
[illegible]

[illegible]
[illegible] material.
G. Johnson maintains that this material remains in the tubes [illegible]
fibrous matrix, either in granulations, or in homogeneous masses, somewhat analogous to that which takes place in tubercles and cirrhosis, and that these masses are impervious [illegible] insulation, non-vascular and [illegible] their pressure on the true glandular structure [illegible]
and ultimately is itself absorbed. M. Bennet considers it [illegible]
[illegible]
[illegible]
[illegible]

M. Rayer considers Bright's disease inflammatory and sits [illegible]
[illegible]

idea of its being an inflamatory disease: "if it is an inflamation it differs from all other [illegible] in two important points: viz: in affecting both Kidneys simultaneously, and in not resulting in suppuration." He rather [illegible] considers of peculiar significance since the [illegible] discovery in Bright's disease argues in favor of its [illegible] diseased elimination or peculiar secretion.

In speaking of the nature of the changes [illegible] changes in the blood: so in considering the [illegible] I shall endeavor to show that they all [illegible] the intermutability of the Blood producing a primary [illegible] in that fluid.

Cardiac and Pulmonary diseases are not intermutually associative [illegible] sequence. I intend speaking of in here only in [illegible] of a cause: the usual explanation of it has been a mechanical

[illegible] viz that impeded circulation through the heart and lungs

[illegible]: 1st engorgement of the kidneys: 2d structural changes.

[illegible] appears to me to explain this more satisfactorily:

[illegible]

the blood and in virtue of its presence other changes occur.

[illegible]

[illegible]

[illegible]

[illegible] cells, which we consider as the point of departure of Bright's disease.

Scarlatina. Of all fever poisons this most frequently acts as [illegible] Cause of renal disease. In favorable cases of Scarlet [illegible]

[illegible]

[illegible] not most common in mild cases, before the [illegible] [illegible] from the system through the skin of the poison, causes the materies morbi to be again introduced into the blood, [illegible] to seek some other outlet: thus the blood is vitiated, [illegible] capable of producing those changes in the cells requisite [for] the inception of Bright's disease.

[illegible]

[illegible]

[illegible] are interfered with, and the poison inclines to the eliminating [illegible] its secretionary channel. Much [illegible] through the [illegible] organs and especially through the Kidneys.

In Carbolina the exhibition of remedies should be [illegible] [illegible] tends the poison to the Kidneys.

[illegible] Carbolic acid at times, by producing a morbid condition of the blood, act as exciting causes of this disease.

The frequent use of intoxicating drinks is powerful [illegible] cause of this disease, since the stimulant effect of the Alcohol is not the only cause to be considered, inasmuch [illegible] of the blood is multiplied: the secretions of the [illegible] hence the blood fails to receive its ordinary nutritious elements, contains alcohol and the products of imperfect digestion. And to these the influence of the cause to which and not which is inseparable from an intemperate habit and we have a complex assemblage of causes calculated to develope that diathesis which predisposes [illegible] and [illegible] habits.

[illegible]

[illegible] generally having its maximum [illegible]

[illegible] and [illegible] and in some more [illegible]

Bright's disease makes its appearance in two different [illegible] 1st and 2nd Chronic.

[illegible]

Here the chronic and most frequently [illegible] it follows a previous attack of scarlet fever. The onset is similar [illegible]

[illegible] A slight dull pain may be felt in the region of the kidneys which is [illegible]

One of the earliest and most reliable set of symptoms [illegible] sometimes of a dark red brown owing to the intermixture [illegible] found more frequently connected with this form than with [illegible]

[illegible] disease where it occurs, has nothing [illegible] it in [illegible] extent: there is no other disease which it is [illegible] so contiguous, or so durable in its presence. Its presence is satisfactorily ascertained by the [illegible] tests of heat and nitric acid, as the precipitated mass occupies less than one third [illegible] some of its fluids, viz urea, and its salts [illegible] of the peritoneum, plura etc. There is a [illegible] disease [illegible] [illegible]

[illegible] small [illegible].

[illegible] of fibrine, but the serum is increased and [illegible]

[illegible] the chronic form is very uncertain. The dropsy may continue, disappear and return again without affording [illegible]

[illegible] body. In such cases as these a cure is seldom accomplished in less than two efflux in four weeks.

It must be acknowledged that death is a more [illegible] termination than recovery and is usually brought [illegible]

Consequence of a [illegible] circulation in the blood, acting [illegible]

Symptoms of the Chronic form. This form is sometimes [illegible]

it sometimes exists months, even years before medical aid is sought: the patient experiences some stomachic [illegible]

[illegible] to micturition with perhaps an ill defined [illegible]

[illegible]

discovered the presence of albumen and a very markedly [illegible]

[illegible]

and perhaps a dull pain in the loins [illegible]

[illegible] to seek relief at the hands of a physician.

If relief is not obtained, nausea and vomiting are added to the other dyspeptic symptoms, great thirst exists, a tone steals over the patient and the surface becomes pale and anemic. At this period it often happens that [illegible] to add an acute attack of the disease supervenes [illegible] by its prominent symptoms: viz. increase of tension [illegible] urine is diminished: there is also a peculiar susceptibility to inflammatory attacks, whether acute or chronic, such as pneumonia, peritonitis, pericarditis, pleurisy &c. [illegible] though generally constipated, yet occasionally they are [illegible] it [illegible] pieces were dehauting [illegible] the debilitated condition of the system.

[illegible] either, but very marked in the chronic form.

Dr Prout gives the normal specific gravity as [illegible] ing from 1.015 to 1.025: M. Lelon, from 1.020 to 1.024 [illegible] that in [illegible] it as low as 1.003. If the specific gravity be accurately

ascertained: it furnishes a pretty certain criterion by which [illegible]

[illegible] constituents of the urine.

[illegible]

liable: an evidence of the disease, nor is the [illegible]

[illegible]

coagulated it occupies one third of the bulk of the urine: it is rarely in the chronic form in greater proportion than one fifth: sometimes in the fatter form its presence fails to be discovered after having been previously quite evident, and if we relied on it entirely in forming our prognosis, [illegible] its non appearance, a favorable result, whereas a few days would assure us of our mistake and prove it a premonitory sign of death.

The quantity and colour of the urine are also very various: the quantity is sometimes natural: sometimes less: sometimes greater: in the last particular it frequently is diabetic. The colour may be yellowish, dark-red, milky, or more natural: it is generally paler than natural [illegible]

Those who have had much experience in the treat-
[illegible]
[illegible] ation in accuracy in diagnosis by formin
[illegible]
[illegible]
[illegible] smaller quantity of Albumen, while the colouring
matter of the blood is diminished in some cases to one
third of its normal average, giving a yellowish-white,
[illegible] cadaverous, appearance.

Many speculations exist with reference to
[illegible] the blood [illegible]
[illegible]
[illegible]
[illegible] by the fact that the Uremic condition is
[illegible] when the Albumen is deficient in heart
[illegible]

[illegible]

explanation appears to me, that there is some failure in the vigor of the assimilative process, dependent on the same cause which predisposes the kidneys to the process [illegible] that the two effects [illegible] of having any mutual dependence, are merely [illegible] results of the same concealed agency."

[illegible], duration, termination, [illegible] of this disease [illegible] and uncertain its duration, says Dr. Bayer, is no subject for calculation in the chronic form the symptoms may be abated, the albumen being no longer coagulable by heat, although the urine may not have recovered its normal quantity and color, that the patient is capable of returning [illegible] with an acute attack which may either prove directly fatal or by proper management again assume the chronic type.

Dr. Christie says: "[illegible] not [illegible] extremely rare: death is almost always the consequence [illegible] produced [illegible] stomach distention of the skin by dropsical accumulation. Death may supervene on account of inter[illegible]

inflammation of the serous cavities: other symptoms of apoplexy or other cerebral diseases arise, resembling total mental disorders. From the description which is given of the symptoms characterising the two forms of this disease it is almost unnecessary to dwell on the diagnosis. [illegible] these symptoms already mentioned.

Lastly, the fourth symptom which arrests the physician's attention and leads him to suspect that his patient may be labouring under disease of the kidneys is dropsy of the face or some limited portion of the body. He then, with a view of confirming his suspicions, examines the urine, and if he finds it scanty, high coloured, [illegible]

Sometimes in organic affections of the heart and vessels, albumen is present but only in a small [illegible] passive congestion. In cancer of the kidney or in other [illegible] diseases, albumen may be precipitated in the presence of acetic and nitric acids: but in this stage of Bright's disease [illegible] will intimate its inflammatory character, and thus

[illegible] our [illegible]

[illegible] of [illegible] or urine [illegible]

mistake is scarcely within the bounds of possibility.

In testing the urines for the presence of albumen

is not satisfactory to rely solely on either of the usual

[illegible]

is complementary, the one of the other: for on the one

hand heat precipitates various salts especially the

[illegible]

is redissolved, whereas if coagulated albumen was

[illegible] it would remain coagulated: so on the other

[illegible] nitric acid precipitates the urates which may

be distinguished from albumen by the application of

[illegible], since they are redissolved, the albumen remaining

[illegible]

[illegible]

[illegible] of renal disease existing yet there are a few

[illegible]

[illegible] the disease even although albumen does [illegible]

In such cases, failing to test the urines, the gradual emaci-

ation and supervention of debility is often attributed to

some chronic gastric disease: which appears a very

[illegible] consciousness in the chronic form [illegible]

[illegible]

[illegible] in that in these cases where the patient seems gradually

[illegible]

that the physician should examine the urine with a

[illegible] of ascertaining whether it may not be in consequence

[illegible] the existence of the chronic form of Bright's disease.

Prognosis. It is important with reference to its

[illegible] to distinguish between the acute and chronic

forms: this may be done by a microscopical examination of

[illegible]

[illegible] are no casts nor blood corpuscles. The quantity

[illegible]

accurate measure of the rate at which the disease is

progressing. Griolle considers the acute form as more

[illegible] it is the result of septicæmia poison and of chronic

[illegible]

A knowledge of the stage of the disease, the degree and extent of the structural change in the kidney, will aid materially in forming a true prognosis: this may be obtained [illegible]

[illegible] by the previous history of the case: it will not do to [illegible]

[illegible] son of facts derived from all three, will throw considerable [illegible]

the physician's power, or that of the patient to remove [illegible] will of course be considered as constituting a favorable prognosis. The secondary diseases must be [illegible]

[illegible] should be carefully watched, and such remedies em- [illegible]

[illegible]

[illegible] inevitable fatal results

affection and it then not accompanied with an effusion

[illegible] recovery are other more complicated

[illegible]

cles which in its turn interrupts circulation and re-

[illegible]

majority of cases and is therefore a valuable diagnos-

tic symptom by some it is thought to have in this disease

certain characteristics by which it can be distinguished

[illegible] more in it is a serious complication and often

[illegible] a potent influence in accomplishing a fatal

[illegible]

lungs and the aerating surface of these organs

being thus diminished, the blood, already impure from

the presence of urea fails to undergo due carbon

deprivation. As in cases of pulmonary

inflamation and sloughing of the cellular tissue

[illegible]

A diminution alone of the dropsy can not be [illegible] a favorable symptom: unless accompanied by a decrease or entire cessation of the excretion of albumen, increase in the quantity and specific gravity of the urine, it is liable to return. Nor must the decrease [illegible] considered as an infallible sign of improvement, nor [illegible] indicating an improvement yet [illegible] in which albumen ceases to be excreted and yet death occurs in a few days.

When this renal disease occurs in constitutions already much debilitated by chronic diseases, or when there is a tuberculous, scrofulous or cancerous diathesis, the prognosis assumes a very unfavorable aspect. In fact it is always very grave: more so in the [illegible] is almost always the termination.

A favorable prognosis would be [illegible] when the urine, losing its unnatural yellow-pale or reddish-brown colour regains its normal amber hue. When it is secreted in its normal quantity, retaining its healthy proportion of solids, instead of being scanty

[illegible]

[illegible]

[illegible]

[illegible]

to be drawn at least to it and to exhibit this [illegible] agents to abate or entirely remove the [illegible]: the means employed have such [illegible] in mind however that since this is only [illegible]

[illegible]

-lative importance and that its return is to be appre-hended so long as the renal disease remains.

[illegible]

would of course be the same as practised when they occur independently of any renal affection proper regard being had to the debilitated and anemic condition of the system [illegible].

[illegible]

of the two forms will be somewhat different, modified [illegible].

In the acute form, when febrile excitement is

[illegible] skin hot and dry with considerable thirst. Antiphlogistic remedies should be employed: blood should be drawn once, or twice even rarely, plenty from the arm: leeches and cups may also be applied to the loins and [illegible] to a more effectual relief from congestion [illegible] dilling: emollient cataplasms placed over the region of the kidneys: demulcent and acidulous [illegible] contribute to that result. When the fever has abated, purgatives may be given: the tincture of jalap will be found a valuable agent in [illegible] combined with jalap: or the neutral salts and senna may be substituted, always remembering in the form [illegible] fluids [illegible]

disturbance [illegible] the inflammation [illegible]

back and [illegible] in [illegible]

be confined to the recumbent posture and kept in bed.

[illegible] is never employed, the system being already [illegible] fatigued and debilitated: local abstraction of blood [illegible] cupping or leeching, the emollient cataplasm, the hot [illegible] water or vapour bath, diaphoretics and [illegible] [illegible] great service here as well as in [illegible] and are given to accomplish [illegible]

Some persons recommend diuretics, particularly [illegible] [illegible] direct alteration in the pathological [illegible]

[illegible] of the treatment is very [illegible] [illegible] to consider the condition of the system [illegible]

disease is dependent. We started with the proposition that [illegible] of whatever nature, accomplished their effects through [illegible] the disease the general plan of treatment is not difficult to be divined: we must employ such agents as are [illegible] instances.

The skin may be made to contribute very materially to this result by inspiring the patient properly with warm clothing and occasionally employing the [illegible] bath, by which means its action will be duly [illegible] a more decided action of the skin is required, diaphoretics must be employed: one of the most efficacious & agreeable of these is nitrate of Ammonia given in the effervescing form.

The bowels are also to be kept gently open by [illegible] administering only when we desire to act upon the complication of the disease, for instance, dropsy.

[illegible]

[illegible] becomes inveterate: in this stage dry cupping by its revulsive influence often proves beneficial: [illegible], mustard & salt, rubbed on the loins, producing con[illegible] [illegible] for the dry cupping, as a counter irritant to drain [illegible] [illegible] state: such is the advice of Johnson, yet M. Ansell says that by the employment of [illegible] Cantharides in seven or eight cases of the acute forms [illegible] -ical cure, and he thinks that he was equally successful [illegible] eight lbs too soon to be [illegible] the same effect [illegible] longer when exhibited in Bright's disease.

Many authors speak of the extreme susceptibility of the system to the impression of mercury and [illegible]

condition [illegible] [illegible] [illegible]
[illegible] should be avoided [illegible] physician [illegible]
[illegible] involving its unpleasant associations
[illegible] [illegible].

[illegible] [illegible] form of [illegible] and
anemic condition of the patient, preparations of
iron are found to produce good results: their
effects are not so markedly and rapidly beneficial
as in Chlorosis where its restores to the blood its
deficient red globules, but bring up the stomach
and relieving the dyspeptic symptoms.
[illegible]
[illegible]
[illegible]
[illegible] of albumen.

In the chronic form [illegible]
with [illegible] disease, confinement to the house and
to bed is [illegible] in the [illegible] form [illegible]
[illegible] in fact [illegible] views
its opposite, Exercise without fatigue, for the opinion
[illegible] [illegible] [illegible] [illegible]
gives an instance of this: after trying the usual
remedies he advised his patient to give up all

[illegible]

[illegible]

[illegible]

An
Inaugural Dissertation
on
Acute Pneumonia
Submitted for Examination
to the
Provost Regent and Faculty of Physic
of the
University of Maryland
for the
Degree of Doctor of Medicine
by
David Campbell Ferguson
of
Virginia

Professional. Gentlemen.

In presenting you a thesis you can not expect me to add any thing to a subject which has been so well investigated by the most noble and honourable medical endeavours. But I will endeavour to state some of the ideas which I have obtained by giving my attention to the interesting and profitable lectures. which I have heared delivered the two last sessions by you. the honourable faculty of the medical department of the university of Maryland. And also the knowledge which I have gained by searching the above mentioned investigations.
This amount of knowledge was indispensable for my further

progress. It also forms what I came here to learn or rather the necessary preparation for that ulterior pursuit which I desire to engage in. It is idle I say for me to attempt to add any thing to the success of previous endeavours. So it will be inferred that I only hope after all due allowance which I have no doubt will be made that I have obtained such knowledge as your honourable body requires. before the reception in that noble profession which I have chosen for a lifetime devotion And upon the issue of which not only my happiness but my future prosperity depends.
I now proceed to my proposed subject. which is not a matter of mere speculative curiosities nor intellectual amusement to be taken

up to day and dismissed perhaps
with unconcern to morrow.
And that subject is Acute
Pneumonia or Acute inflammation
of the substance of one lung.
Now of Pneumonia. It is true
that the changes which is
produced by acute inflamm-
ation of that organ is asser-
tained by the application of
the ear. It is necessary there-
fore that I should in the first
place describe the morbid
anatomy of acute inflamma-
tion of the pulmonary
substance. There is three
well marked and very
constant conditions of the
organ under consideration
corresponding to different
periods of the inflammation.
Which I will describe in
succession in the order in

which they take place.
First. Engorgement. Second
Hepatization. Third. Gray
Hepatization or Purulent
infiltration. And sometimes
but very seldom gangrene.
as a result of acute inflamm
ation of the lungs.
First. Engorgement. The substance
of the lung during the
first stage of the inflammatory
process is gorged with
Bloody Serum. It is of a
dark red colour externally
and crepitates less under
pressure than sound lung.
There is more liquid than
air in its cells. It is also
heavier than sound lung.
and some what inelastic.
And if incised the cut
portion or surface is very
red. and frothy. Serum flow

from the incision when squeezed. The Cohesion is also some what diminished. And it is more easily torn than sound lung. In this stage of Engorgement. the mucous membrane of the small bronchial ramification is of a deep red colour. The portion most engorged although the specific gravity is increased will almost always float on water. Second Hepatization. The lung in this second stage is still red externally and within. But crepitates no longer under pressure. And a piece of the solid portion will sink in water. In deal it contains no air. The cut surface present. sometimes a uniform red colour

and sometimes of a slightly mottled appearance. In this stage the spongy character of the organ is lost it is solid. But there still flows out under firm pressure when a fresh incision is made some red fluid. but it is less in quantity than in the stage of Engorgement. And it is not as frothy as in the former degree of the inflammation. and if the surface of the lung be scraped with a scalpel it may often be perceived in the red fluid. some thicker and more yellow matter mingle with the red fluid. The Hepatized lung is also denser than in the first stage and it is very easily crushed and broken up.

the air vesicles is also clogged up and made red by the inflammation. And if a portion of the hepatized part be torn or cut. and the torn surface examined. The pulmonary substance will appear to be composed of a crowd of red granulations. And as the lung contain no air. in the stage of hepatization. If the entire organ be involved it will not collapse. The pulmonary texture when in this condition is generally so much soften that a moderate degree of pressure between the finger and thumb will suffice to crush it up. Third. Gray. Hepatization. In this stage of acute Pneumonia. The Pulmonary

tissues is impervious to air. and undergoes and alternate of colours. It is sometimes of a reddish yellow or straw colour or it may present a grayish hue. and sometimes the organ is mottled. The texture of the lung in this degree of the inflammation is very rotten and very easily crushed between the finger and thumb. It is full of puriform matter which is sometimes so abundant that it oozes out plentifully when the lung is incised. The gray pus shows itself upon the cut surface in minute drops. and if the finger be gently forced in any part of the organ when in this condition a small cavity

is easily made which soon fills with pus. or in one word the lung consists in diffused suppuration. Again is an abscess ever a result of acute Pneumonia. It may be and sometimes is a consequence of Pneumonia. But an exceedingly rare event. Lastly. Gangrene is sometimes but very seldom the result of this disease. Sometimes it occupies a very large portion of the lung. And at other times a small spot. The Gangrenous portion is of a dark dirty olive colour. And is moist and wet it is also generally soft and stinks horrible. I have been describing the Pathology of Acute inflammation of one lung

alone. But there are two lungs. and inflammation may affect both organs at once. But it is far the most common in one alone. Again the inflammation may be partial or general occupying a part of one lung or the whole organ at once. But the inflammation does not affect all parts or both lungs indifferently. But it is more common in the right lung than in the left. It is also well known that the lower lobes of the lungs are more liable to inflammation than the superior lobes. But when inflammation does attack the inferior lobes it spreads upwards frequently to the superior. What are the complications.

complications of Pneumonia.
Acute Pneumonia is almost constantly complicated with more or less Bronchitis. And Pleurisy is so frequent a complication of this disease. that it induce some writers to call it Pleuro Pneumonia. But inflammation of the pulmonary substance does sometimes occur without being accompanied with Pleurisy. There are also several other affections which are very apt to arise during the course of acute Pneumonia. as Pericarditis. Brain affections. and the liver is also sometimes affected. causing what is sometimes called bilious Pneumonia.
The Local and general Symptoms of Acute inflammation of the

pulmonary substance. In the majority of cases the commencement of acute Pneumonia. is marked by shivering followed by or alternating with increased heat of skin. and increased frequency and force of and generally hardness of pulse. with considerable derangement of most of the natural functions of the body. commonly there is headache and confusion of thought. thirst loss of appetite. And at the same time or presently after a stitch or pain in the side. most commonly felt on a level with or a little below one or other nipple. But it may exist in almost any other part of the thorax. This pain

in the side generally comes on with cough. and a sense of oppression in the chest. And is generally sharp if the pleura be inflamed. But if the substance of the lung is affected without any concurrent pleurisy. the pain may be slight. And the patient may complain only of a morbid trouble or a sensation of weight or tightness. with heat on the affected side. Instead of the sharp pain which so generally occurs in the onset of Acute Pneumonia. Dyspnea is another important symptom which is sometimes but slight at the outset of the disease. But more commonly severe. The cough at first is dry. but it is soon attended with expectoration. Lastly fever always

accompany acute Pneumonia in a more or less degree of severity. Again as the most characteristic symptoms of Pneumonia deserves a single description I will take them up separately. Delirium is a symptom which generally occurs in the course of an attack of acute Pneumonia. And it denotes that the due arterialization of the blood is interfered with by the inflammation. The expectoration of this disease when well marked constitutes one of the most certain indications of the presence of Pneumonia. It consists of transparent and tawny or rust coloured mucus uniting in the vessel containing it into one trembling

mass. And of such viscidity that the vessel can be turned bottom upwards and shaken without detaching these masses from the bottom of the vessel. It can not be said that when the rust coloured sputa is not present that there is no Pneumonia. But if such expectoration does occur there is almost certainly inflammation of the pulmonary substance. The colour of the expectoration of Pneumonia varies some what according to the stage and severity of the inflammation. At the outset of Pneumonia either nothing is spat up or simple some bronchial mucus. But in the course of twenty or thirty six

hours. generally the matter expectorated becomes composed of mucus united and combined with blood. It is not streaked merely with blood like that which so often occurs in bronchitis. But the blood and the mucus is united together and in proportion to the quantity of blood. the sputa becomes of a yellow or rust colour. Or of a decided red appearance. And at the same time it becomes tenacious. and adhere together so as to form one transparent mass. And so long as this mass flows readily along the side of the vessel when tilted so long there is reason to hope that the inflammation has not passed its first degree.

But if the sputa becomes very viscid and will not separate themselves from the vessel that it is spat in when it is inverted. or cannot be easily shaken out of the vessel when inverted it is to be feared that the inflammation has reached its second degree. In fact when the sputa becomes thus rusty and very viscid the chest almost always returnes a dull sound on percussion. Now if the inflammation recedes the sputa becomes less tenacious. less red or yellow and more like the expectoration of mere catarrh. But if the inflammation goes on from

bad to worse the rust coloured expectoration may continue to the end. But it is commonly less in quantity in that case or none at all. not that the mucus ceases to be secreted but that its excretion is no longer possible. either on account of the extreme debility of the patient. or on the account of the great tenacity of the mucus. The sputa then of course accumulate in the air passages and sometimes suffocate the patient.
Again in some instances the expectoration in the advanced stage of the disease consists of a fluid having the consistence of gum water and

of a brownish red appearance like plum juice. And the mere occurrence of this kind of sputa leads the experience physician to fear or announce the existence of the third stage of Pneumonia. And sometimes during the third degree of inflammation of the pulmonary substance very perfect pus is expectorated. Although this rust coloured sputa is generally present during the acute periods of Pneumonia. But it does not always accompany it. For sometimes there are scarcely any expectoration at all. Or the expectoration may be like that of simple catarrh. Again when Pneumonia passes into gangrene the sputa becomes of a green or dirty gray

colour and stink like the odour which proceeds from gangrene of the external parts. The dyspnea produced by this disease vary greatly in its degree in different cases. In some cases it is very slight hearddy perceptible in others cases the patient seems wholly occupyed in respiring. And scarcely is able to lay down for fear of immediate suffocation. The nostrils are working the face livid or pale with the shoulders commonly elevated. Decubitus patient labouring under Pneumonia almost all lie upon their back. I have been describing the local and general symptoms of acute Pneumonia. as they generally takeplace. without the

physical signs of Pneumonia.
But they exist together therefore
I shall briefly run over
them in connection with the
physical symptoms of acute Pneumonia.
The commencement of acute inflammation of the pulmonary substance. Is generally marked by shivering. pain in the affected side with suffusion of one or both cheeks or of the whole countenance varying from a bright red flush to a deep violet.
modified by the difficulty of breathing accompanied with or followed by inflammatory fever. increasing with the close of the day. The pulse is also full heaved and frequent. often one hundred or one hundred and twenty per minute.
With cough with or

without expectoration. And at this period the ear if applied to the surface of the chest immediately over the inflamed portion of the lung may generally detect a crackling sound mingle at first with the natural vesicular rustle. which of course at first obscures the natural sound. But it does not entirely cover it at first. Though as the inflammation advances the crackling sound becomes more and more pronounced. untill at length it totally supersedes the natural murmur. And as long as the natural rustle prevailes over the crepitant rhonchus the inflammation is commonly slight. But if the crackling should

predominate or ultimately
mask the natural respiratory
rattle entirely. The inflamma-
tion is progressing fast and
soon will pass from the
first stage to the second.
If not quickly arrested by
its counteracting remedies.
Again crepitation does not
remain long in any one
part of the organ. as the
inflammation progresses the
sound is less and less heard
untill it is fixed in that
spot. and it may be heard
in another part of the lung.
or it may be succeeded by
the natural respiratory mur-
mur again. which denotes
resolution. or the crackling
may cease. and either no
sound is heard in its stead
or a puffing or whiffing sound

is heard. which denotes that the disease is growing severer and that the lung is becoming or has become hepatized. Comparisen minute crepitation in the beginning of Pneumonia may be heard in a small spot or it may be audible over a larger space. It is the smallest and finest kind of crackling. which resemble the crackling explosions of grains of salt when scattered on red hot fire coals. or a pretty correct idea of this sound may be obtained by rubbing between the finger and thumb a lock of one's own hair close to the ear. The seat of this fine or minute crepitation is in the smallest ramification of the

bronchi and the air vesicles.
In regard to the causes of this crepitation: There are two opinions one is that it is caused by the passage of air through frothy liquid. The other opinion is that the distended blood vessels and effusion press upon the air vesicles without entirely obstructing them. but sufficient to stick the sides together by the viscid mucus. And the air forcing its way through the air vesicles gives rise to the characteristic sound.
The symptoms which I have been describing are the phenomena which constitutes the very first appearance of Acute Pneumonia.
On the second or third day new symptoms are added The expectoration hither to

absent or catarrhal becomes rusty being at first moderately viscid and having a degree of colour proportioned to the variable quantity of blood which it contains. The minute crepitation drowns the natural respiratory rustle. The clear sound produced by percussion begines to diminish and the pain still remaining, but generally less severe. The difficult of breathing is also increased. In this condition of the disease the inflammation is as yet in its primary stage. and it often remains stationary for a while and then terminate in resolution, or the inflammation may become more intense. and pass from the first to the second

Stage. that of Hepatization.
And it certainly is established
when the breathing becomes
more and more constrained
and more accelerated and
the speech ceasing to be pre
interrupted or panting. The
sputa very viscid rusty
and adhering very close
to the bottom and sides
of the vessel which contains
it. with the chest sounding
dull or flat when percussed
over the affected lung. with
the sensation of the minute
crepitation which is so
characteristic of the first
stage in the spot where
it was heard first with or
without its occurance in a new
portion of the affected lung.
Now what does the ear detect

when applied to the surface of the chest over the Hepatized lung. The chest may be felt heaving up against the ear and no sound detected or one or both of two entirely different sounds may be audible. that is a whiffing or puffing sound, I mean bronchial respiration. which is conveyed to the ear from the still pervious branches of the bronchi through the solid portion of the lung. which surround them. and also through the walls of the chest. And if the patient speaks his voice is more resonant than natural and is also more resonant than in the corresponding space on the sound side of the chest. The existance and

degree of bronchial respiration and bronchophony vary according to the place and extent of the Hepatization. The are most marked when the number and size of the bronchial tubes involved in the hepatization are the largest. As when the inflammation occupies the upper part of the lung. or the central portion or when the hepatization extends to the surface of the pulmonary substance. But if the inflammation is limited to the lower lobes alone or it is merely superficial bronchial respiration. and bronchial voice may not be heard. or if the hepatization should be so complete as to prevent the expansion

of the chest on the affected side. Bronchial respiration will not be audible. For the air in the bronchi is stagnant. But if the ear be applied to the sound side of the thorax if the whole of the affected lung is hepatized. Puerile respiration will be heard. It seems as if the unaffected lung is endeavouring to compensate for the spoiled one.
In connection with bronchial respiration there is usually dullness on percussion. if the lung be completely hepatized. Or if the solid part comes close up to the ribs the thorax will sound dull over the affected part or side. But if a portion of permeable lung. even a

very thin portion should intervene between the Hepatized part and the walls of the chest there will still remain resonance on percussion. But it will be somewhat diminish or not exactly natural somewhat duller. now here comes the puzzle. Auscultation has traced Pneumonia through the stage of Engorgement in to its stage of Hepatization. Now can it be traced any further by the ear. The answer would be not with any degree of certainty. unless the structure of the lung break down and a portion of it be expectorated air finds its way into the vacant spot and gives rise to cavernous respiration with

gurgling crepitation and percussion flat. Again it may be strongly guessed at if not entirely known that the stage of purulent infiltration has taken place if the patient face becomes exceedingly pale. The pulse feeble small and irregular. with diminish action in the capillaries. And great sinking in the strenght of the patient with the expectoration of pus or a fluid having the consistence of gum water and of a brownish or plum juice apearance. And the existance of the disease for a suppicient lenght of time to have passed in to the third stage. But this last circumstance is not very certain as the lung has been found is a state

of suppuration at the end of the first week. The duration of Pneumonia in mild cases with good treatment from the very begining. may terminate in resolution on the fifth or sixth day. But the average duration is ten or twelve days. Though some cases may and is prolonged a fortnight. and perhaps longer. If the disease terminates in death it may in severe cases prove fatal on the third or fourth day. But more frequently on the seventh or eight day.
The cause of Acute Pneumonia are exposure to cold or exposure to cold after being confined to very warm rooms or exposure to cold and wet when the skin is in a

State of profused perspiration.
Pneumonia generally occurs in winter and spring.
But it may occur any time during the year.
Prognosis. The Prognosis of Pneumonia is variable being favourable when the patient has been in previous good health and treated early.
But if it occurs in feeble or broken down constitutions it is more or less unfavourable.
Or if the breathing becomes very difficult with a feeble irregular pulse.
with delirium. pale face and livid lips. the disease is more or less unfavourable. Or if the expectoration becomes very viscid and rusty. or becomes brownish resembling plum juice

it announces intensity of the inflammation. Treatment. All that I have hitherto been writing relates to Acute Pneumonia of one lung occuring in a previous healthy person. Therefore I can only give the outlines of the treatment of this disease. And of course different cases will require different modifications of the general rules and indications. Which I do not propose describing fully in this essay. It will be anticipated from what I have been stateing that the lancet should be used. If the patient is seen early while the pain or constriction in the side is severe with great

difficult of respiration.
It will not only be proper but essential to bleed the patient standing up from a large orifice in a vein in the arm until the pain or constriction and difficult of breathing is relieved. or until syncope appears to be at hand.
Sometimes the constriction and embarrassed respiration is not relieved by the first bleeding. although the bleeding has been carried to faintness. In these cases the first bleeding will not suffice. And as soon as the pain and dyspnea returnes in those cases in which they was mitigated or relieved by the first bleeding.

and the pulse continues
firm and hard the vene-
section should be repeated
again and again at intervals
as the symptoms call for
the repetition. if the relief
has not been sufficient
without. And after general
blood-letting is counterindicated
and pain still remains
in the side corresponding
to the inflamed lung.
much good may be done
by locally emptying the
blood vessels by leeches
or cupping-glasses applied
over the inflamed portion
of the lung or below the
angle of the scapula. The
benefit derived from
blood letting in Acute
Pneumonia will vary in
proportion as it is early

or latter employed. If resorted to early in the stage of Engorgement before the spongy texture of the lung has becomed obliterated. It has the tendency to restrain the inflammation by diminishing the quantity of blood. And thus lessen the hearts action and thereby check or lessen the supply of blood to the inflamed lung. As well as abating the force with which the blood reaches the inflamed organ. But when the inflammation passes from the first stage in to the second blood-letting is attended with less benefit. But even in the stage of red Hepatization if duely employed

it will be attended with advantage. The symptoms which call for bloodletting in the second stage are such as will be inferred from the previous discription. As the strenght remaining sufficiently good with a full hard and quick pulse. with dyspnea and the constriction great.
Small bleeding from the arm or by means of leeches or cups to the chest will lessen the quantity of blood and thereby unlock those portions of the lung that are still pervious. And at the same time puting the whole system in a condition most favourable for the absorption of the effused

lymp. But bloodletting will not at altimes extinguish the inflammation.
Therefore it must be assisted by other remedies. After free depletion by the lancet or alternated with or when bleeding is inadmissible.
Tartar Emetic will be found a valuable agent in acute Pneumonia. when properly administered.
It acts as a sedative upon the circulation reducing the action of the heart and diminishing the frequency and fullness of the pulse. and perhaps slightly exciting most of the secretions.
In doses varying from one fourth of a grain to one grain or more perhaps every hour or every two hours

dissolved in a little water. And if it act violently upon the bowels it will be necessary to add a little opium or a few drops of Laudanum to each dose. If the patient grow very pale and sick the remedy must be intermitted and the patient allowed to recover himself from the effect of the remedy. If the inflammatory symptoms return. The remedy must be repeated. I scarcely need state that Tartar Emetic as well as bloodletting is best adapted to the stage of Engorgement. Though it does sometimes find a place in the second stage. But the great remedy in the

Stage of Solidification is Calomel administered in doses varying from one half of a grain to one or two grain every hour or every two hours. Combined with Ipecacuanha. preventing it from passing off by the bowels by opium. Pushing it to slight ptyalism. as quick as it is expedient. Mercury is the great remedy in the second stage of Pneumonia. But it may be administered with advantage in the first stage in combination with or alternated with the Tartar Emetic.
I should have or should state that a active aperient should be administered at the onset

of this disease. And afterwards keeping the bowels regular by mild aperients. If the inflammation progresses and goes on untill the vital powers begin to fail which is known by a pallid face coldness of the extremities and general surface with a feeble irregular pulse. Stimulants are required to sustain the powers. And the best of these are wine or wine whey or what is perhaps better carbonate of Ammonia in a decoction of Senega and Benset half an ounce of each to a pint and a half of water boiled to a pint. External remedies. Benefit may be expected

from a large blister applied to the thorax over the affected lung. After the fever is no longer high the skin not hot. And there still remains difficult of breathing with difficult of expectoration. And the pain or tightness still remaining in the chest. Regimen. The Regimen in Pneumonia must be strictly antiphlogistic. The patient must be confined to bed in a moderately warm room. And not allowed to talk. so as to exercise his lungs. His diet must be principaly gruel. This completes the Treatment of the active stages of Acute Pneumonia. So it only remains for

me to state that that when symptoms of great exhaustion occur. the patient should be allowed tonic doses of the sulphate of quinia. and beef-tea. with other means of support.

An
Inaugural Dissertation
on
Bilious Remittent Fever
Submitted to the examination
of the
Board Regents and Faculty of Physic
of the
University of Maryland
for the
Degree of Doctor of Medicine
by
James Mann McPherry
of
Virginia

Bilious Remittent Fever

This disease is most prevailent in the middle, southern and southwestern portions of the United States, and is the most common form of fever in those portions of our country, with the exception of Intermittent fever.

The disease is not peculiar to the United States, but is common to all low and marshy districts of topical climates.

It is a frequent disease in the southern portions of Europe, in Africa and in the East and West Indies

This form of fever is not confined to topical climates, though it is most common and generally more dangerous in hot countries. It does occur, and often prevails to a fearful extent in some of our northern states, though it is generally during summer of intense heat and long protracted drouth.

Persons moving from temperate to top-

ical climates are most liable to be attacked with this disease; and to such transgressors it generally presents itself in its worst and most dangerous aspect

The inhabitants of countries where the disease is most common, seem to become acclimated to it, and when attacked by it it is generally in its mild form.

Causes which give rise to Bilious remittent fever; an long exposure of the body to the heat of the sun. Exposure to damp such as sitting or laying on the damp ground, wearing damp clothing. Malaria is one of the principle causes, and I think that it is the principle and only cause in a great many instances. Exposure to intence heat of the sun, has a marked influence in producing the form of fever either by eliminating an aeriform morbific matter or by predisposing the syst. to the morbific matter, by which it is constantly surrounded.

Bilious remittent fever is divided into three forms. the simple or mild. the inflammatory. and the malignant. congestive or pernicious. Dr. Eliotson's practice of medicine, besides these, that he adds the congestive forms a fourth variety, giving the symptoms and causes of the disease separate from the other forms. and Doctor Wood's describes the pernicious, as a distinct form. but following our much esteemed professor of the principles and practice of Medicine I shall describe these forms ~~under~~ under the Malignant type.

The simple or mild form. as its name implies, is generally of a very mild nature, seldom causing death.

The symptoms of this form of the fever. the attack is generally preceded for some days, by listlessness, langour, nausea loss of appetite and aversion from food. costiveness. heaviness and fullness of the stomach. bitter taste in the mouth, and sometimes headache and pains of the head.

Sometimes the attack seems so abruptly. the patient staggers with shiverings down the spinal column, which, after one or more hours, is followed by increased heat over the whole surface of the body, the skin becomes parched and dry, the face flushed and bloated, the eyes red and suffused the respiration hurried and irregular the pulse becomes quick and regular but it is seldom hard or tense. there is generally tenderness over the epigastrium. the tongue is generally moist its edges and tip, being of a bright red colour, and the middle portion is generally covered with a light brown fur, which often becomes thick and dry. there is generally great thirst. the stomach is often irritable, and spontaneous vomiting may occur this generally occurs at the commencement of the disease or not until the third or fourth day after the attack, the matter vomited being generally

of a yellow, greene, or bright greene colour and of a noisseous and bitter taste. the bowels are generally constipated. these symptoms, all, belong to the period of exacerbation. which period lasts generally from twelve to eighteen hours.

Then follows the stage of remission the symptoms are all lessened in intensity. the skin is somewhat relaxed, the pulse is diminished in frequency and the thirst is not so annoying or great. this stage lasts generally from one to two hours. then the exacerbation returns with all the symptoms before described which are apt to be more severe, or this form of the fever may turn into the inflamatory or malignant form. if not cured in twelve or if the patient be not attentive to his diet or in exposing himself to soon. Critical days are reckoned in by some the seventh day after the attack. therefore is looked upon

as the time, for the patient to commence to improve or for the disease to assume a more grave and dangerous form

The duration of this form of the fever is from nine to fifteen days

The second or Inflamatory form of the fever is generally ushered in by a chill or by a chilly sensation along the spinal column, which lasts from one to more hours, and is then followed by an excitation which is recognised by increased heat over the whole surface of the body, the skin becomes hot and dry, the tongue is covered with a yellowish fur, the pulse becomes quick, frequent, and is generally more or less tense. the respiration is hard, quick and often difficult and irregular. head ache, pain in the back and limbs which are sometimes very severe, great restlessness and jactitation, watchfulness the patient being unable to sleep, but sometimes lendemain

the bowels are generally loosed. though occasionally diarrhoea occurs which is often difficult to manage. great debility of the whole system generally accompanies this form of the fever from the very commencement of the disease. the exacerbation lasts generally from eighteen to twenty four hours. though they vary in duration. The remissions come on very slowly. when they do appear. the febrile symptoms are all lessened in some degree. the pains of the limbs and head ache are also somewhat moderated. the skin is not so hot and dry. and the thirst is not so great. this is the stage for the medical man to exert all of his tact to prolong. if he succeeds, he will be rewarded. in most cases by the happy termination of the disease If he does not succeed. the exacerbation takes hold again with the symptoms before described as belonging to that stage. The fever may terminate in five or six days or the patient may

sink into the low typhoid state and it may last for two or three weeks. the usual duration of this form is from nine to fifteen days.

The third form is the malignant congestive or pernicious. this form as its name indicates. is the most dangerous. The symptoms and the manner in which it attacks, are exceedingly various in some cases the attack comes on like the simple form. the first one or two of the exacerbations being mild and the remissions well marked. then a malignant exacerbation comes on. and all the symptoms that I have enumerated under the simple and inflammatory form come on. but in a more severe and dangerous form. The remissions are hardly perceptible. there is great prostration of the whole system. the skin is parched and dry. the teeth lips and tongue are covered with black sordes. vomiting is a frequent symptom. blood being often thrown up

respiration is hard, frequent and often stertorous. Violent head ache and coma are frequent symptoms during the course of this form of the fever. The urine is scanty and high coloured. The pulse is small and corded. The bowels are generally torpid. This form of the disease may commence abruptly, and persons who are well acquainted with the disease will recognise it at once, the patient's system will appear to give way and be prostrated at once, without his ever experiencing an incubation. The skin becomes cold, and covered with clammy perspiration, as in the collapse state of cholera. The pulse is weak and fluttering. The stomach is irritable, with frequent and painful, but generally unsuccessful attempts at vomiting. The countenance is pale and shrunken. There is often low muttering delirium with shivering and fainting. In some cases no complaints of pain or sufferings are made by the patients, but others seem

[illegible] manifest their sufferings by uttering the most [illegible] groans. [illegible] powers are soon and irrevocably exhausted by the reoccurance of these violent exacerbations the third, fourth, or fifth occurence of these paroxisms generally terminates the patients sufferings by producing death. or the patient may fall into the typhoid state and the sufferings may last for a month or for a longer period, though the general duration of this form is from two to three weeks.

The convalescence from any form of bilious remittent fever, is very slow and protracted, and the least imprudence, may cause death or bring back the disease in its most dangerous and [illegible] form.

Complications. These are numerous and some of them are very apt to be passed over, unnoticed, from their obscurity, and by neglecting to study

the complications of particular cases we may administer, the very remedies that will tend to cure that complications and not be aware of what we have done, until it is too late to be of service in restoring them to health. The most frequent complications are Gastro-duodenitis. Hepatitis structural changes. Inflammation of the brain and its membranes. and may often involved the lungs congested. these complications are diagnosed by these different and peculiar symptoms

Gastro-duodenitis. this may be caused by the pouring out of acrid bile or other acrid secretions, into the stomach or duodenum. the symptoms are pain and tenderness on pressure, over the epigastrium, irritability of the stomach or bowels. Vomiting or diarrhoea. there is great thirst, and every thing the patient takes into the stomach, is immediately thrown up.

Hepatitis, or inflammation of the liver is a very frequent complication, and is recognised by the presence of pain and a sense of tension in the right hypochondrium, increased on pressure over that region, inability to lye on the left side, difficulty in breathing, dry cough, vomiting and hiccup

The lungs affected during the cold stage, produces difficult breathing and loses the respiratory murmur, and is dull on percussion, over the diseased organ.

Inflamation of the brain or its lining membranes, this complication generally commences during an exacerbation, when the vascular system is very much excited. It is recognised, by severe pain of the head, a sence of constriction across the forehead, throbbing of the temporal arteries, flushed face, eyes injected and of a wild and brilliant look, preternatural sensibility to external impressions, light

and sound. inability to sleep. delirium convulsions. parched and dry skin. white tongue and great thirst.

Structural changes or diseases are most apt to occur in the last periods or stages of the disease.

Pathological legions. with these we are very imperfectly acquainted. very few facts, have been recorded in relation to them. traces of disease are most uniformly found. in the stomach. duodenum liver, spleen. and sometimes in the brain and lungs.

The stomach and duodenum are often found. inflamed. increased redness of the mucous membrane and sometimes softening.

In the liver traces of inflamation are sometimes found. sometimes engorgement.

The spleen. in most cases is enlarged inflamed and often engorged with blood. Brunners. glands are sometimes effected. but it varies so much that

no particular signs can be laid down.

The Diagnosis. the disease being generally confined to warm and miasmatic countries, and knowing that the complaint is prevailing, will assist us materially in forming our opinion. The diseases for which bilious remittent is most apt to be taken for are Intermittent fever, Yellow fever and continued fever, sometimes it may mistaken for Gastro-duodenitis.

It is distinguished from the intermittent fever, by the regular and complete intermissions which occur in intermittent fever.

We distinguish it from Yellow fever, by the violent pains in the head, back and loins, by the orange red suffusion about the face and neck, and by the occurrence of black vomit.

It is distinguished from continued fever by the continuation of the febrile symptoms, by the rose spots, and by the pathological lesions after death.

bilious remittent is readily distinguished from gastro-duodenitis, by the non occurrence of remissions, and by the pain and tenderness on pressure over the epigastrium which occur in the latter mentioned disease.

Prognosis, the probability of recovery from any form of bilious remittent fever varies exceedingly. In the simple or mild form of the fever, we may confidently expect and assert, that the disease will terminate favourably, if proper regard to diet and exercise be kept.

The other forms of the disease are exceedingly difficult to tell any thing relative to their duration or termination, and it is especially difficult when the disease is complicated with other diseases. When we see the disease in its commencement, we may venture to tell some symptoms that are likely to occur during the disease, but we should be exceedingly circumspect and careful not to commit ourselves too far.

Treatment. this must be varied according to the form and to the symptoms presented.

In the simple or mild forms. hardly any medical treatment is necessary. the bowels should be kept regular. if constipation exist. a dose of Calomel. should be given which should be followed by a dose of Castor oil. the diet should be properly attended to, and the patient should be exceedingly careful not to expose himself. too soon or for too long a time.

In the severer forms, the first thing that comes to our minds, regarding the treatment. is whether we shall use the lancet or not. general blood-letting is an exceedingly useful and valuable agent, when used at the proper time. though it has been injured with so much. that some practitioners have given up its use altogether. when used properly it will relieve the severity of the exacerbations. the intermissions will become more marked and of longer duration. It subdues the vascular excitement. the skin becomes moist.

and more relaxed. the pains will be relieved or partially so. and the patient may enjoy a refreshing sleep after its employment.

The indications for its use, are great vascular excitement. the pulse corded and firm. plethoric habit. strong and vigorous constitutions. If the patient has not been weakened by previous attacks of disease, head ache. pains in the back and extremities. when the intermissions are short and imperfect and at the commencement of the disease. It is seldom necessary to use the lancet after the disease has run several days. and if used at this late period it should be with great caution.

Local blood letting. by cups or leeches. this is a very valuable agent. and may be used with out much risk, it is generally used, when General blood letting is not admissible. to relieve. local inflamation and congestion. when there is gastric cupping or leeching over the epigastrium inflamation of the brain. or severe pains of the head. apply cupping or leeches to the

temples or back of the neck.

Cathartics, these are next in efficiency to blood-letting and are allways indicated in treating this disease. I beleive the best cathartic is a combination of calomel and Rhubarb when there is great vascular excitement the secretions are generally lessened. this combination serves to produce copious secretions after administering calomel, we often find it necessary to give some more active cathartic to empty the bowels and carry of the increased secretions. a drahm of Castor oil, or a combination of a drahm of Sulphate of magnesia with the same proportion of Calcined magnesia, will be found the best we can employ. If after this the bowels become torpid, milder remedies will be found to answer a good purpose, in keeping the bowels free and open.

Sulphate of Quinine, has been found to exert a very beneficial affect over this disease In the milder forms of the disease, given in doses of from three to five grains, and during

stage of remission. In the more dangerous forms of the fever, it should be given at once, not waiting for a remission. it should be given in doses of from ten to twenty grains every two or three hours, until its peculiar effects are produced on the system. If there is any complications, combine it with such medicines as will be necessary to relieve them.

Doctor R. W. Shoemaker Jr. told me, that during his service in the Army and Navy, he saw a great deal of this form of fever and that he found quinine, given in free doses, until its effects were produced upon the system, to be one of the most useful and valuable remedies, that could be used in its treatment.

Febrifuge agents. Cold water and Ice. Sponging the whole surface of the body with cold water. When the fever is attended with a hot and dry skin, will be found to be of service, which if at the same time, is a very agreeable and comfortable remedy

stage of remission. In the more dangerous forms of the fever, it should be given at once, not waiting for a remission, it should be given in doses of from ten to twenty grains every two or three hours until its peculiar effects are produced on the system. If there is any complications, combine it with such medicines as will be necessary to relieve them.

Doctor R.M. Sherry Jr. told me, that during his service in the Army and Navy, he saw a great deal of this form of fever and that he found quinine, given in free doses, until its effects were produced upon the system, to be one of the most useful and valuable remedies, that could be used in its treatment.

Bathing agents, cold water and sponging the whole surface of the body with cold water, when the fever is attended with a hot and dry skin, will be found to be of service, while it at the same time, is a very agreeable and comfortable remedy

by sponging the perineum and the surface of the body with cold water. it sometimes has the effect of reducing the morbid heat, relaxing the skin and promoting perspiration, thereby shortening the exacerbations and sometimes inducing a complete remission.

When there is violent head ache, delirium or any symptoms that would lead us to think the brain affected, and when the fever was very violent, pounded Ice applied to the head, or a stream of cold water poured upon the head, will often be of great service in relieving this dangerous complication.

If the sponging or the ice produce a shivering or a disagreeable sensation they should be discontinued and they will generally be found to be comforts.

Emetics are very rarely used, sometimes in the early part of the fever they are called for, but it is very rarely.

Diaphoretics as by some authors

are highly efficacious, particularly a combination of Tartar Emetic, Nitre and calomel. They will be found most useful in the inflammatory form of the fever.

In many cases the stomach will be found very irritable, vomiting or frequent ineffectual attempts to vomit will be the most distressing symptom, this will often be relieved by bleeding from the arm or if this is inadmissible, cupping or leeching over the epigastrium, if this will not give relief, we must, by blistering the epigastrium, let the patient hold a piece of ice in his mouth, Calomel given in doses of an eighth or a quarter of a grain and frequently repeated, if these will not give relief, give a grain of Acetate of lead, dissolved in water, every hour or two until relief is obtained.

Diuretics and stimulants are very useful, in the later periods of the disease and especially in the low typhoid state that occurs in the malignant form.

the best of these are brandy, ammonia or ether.

Anodynes are very requisite to relieve pain and procure sleep. opium and morphia will be found to produce these effects.

Diet. this is a very important item in the treatment of the disease, therefore much caution should be given to the patients. fortunately for them, they generally have but little relish for food.

Fluids should be allowed only, such as Barley or Rice water, cold least water acidulated with lemon or orange juice and such light and unirritating substances.

In the more advanced period of the fever a more stimulating and nutritious diet is called for, such as eggs, brandy and milk, beef soup, and occasionly, if agreeable a glass of sound wine.

The convalescence from any form of Typhoid or remittent fever, is exceedingly slow and protracted, and relapses may be brought on by the most trivial con-

Necessary precautions to be observed during convalescence. the patient should be guarded from the effects of the sudden changes of the temperature, and from incurring the least degree of fatigue, by sitting up to soon or for too long a time. Any and all things that cause a depressed state of mind, or the health should be avoided, caused by the patient and his nurses. The bowels should be regularly evacuated, which may be obtained in a measure by allowing the patient of perfectly fresh and sound fruit of the season; but if the bowels be much constipated a mild laxative should be administered. Care should be taken to have the urine evacuated every day, as it may happen that the urine is not the matter

Exercise this enjoyment the patient must not be too rapid in enjoy, he must consider his strength is suffering extreme and it should only be taken by degrees

After the patient has recovered sufficiently, a trip away from home, to some place

[illegible] it [illegible] been [illegible]
restoring him to perfect health and strength.
In this dance both the patient and the
physician must remember "the old adage"
"Patients and perseverance conquers all things"

Inaugural Dissertation

on

Dysphagia

Respectfully submitted for examination

to the

Trustees, Regents and Faculty of the

University of Maryland

in

partial

fulfilment of the requirements

for the

Degree of Doctor of Medicine

By

Thomas Hammond

Md.

1901

To the Honorable Faculty of Physic
of the University of Maryland

Gentlemen

On presenting you this thesis, I rely not upon its merit to procure me a Diploma. Your mandates call upon me, as a candidate for graduation, to present you a thesis of my own composition, on some subject connected with the Medical Science. That Gentlemen would be no task at all; and yet be no evidence of my qualification as regards the practice of Medicine. But to present you a thesis of my own composition, upon the theory, practice or modes of exercise of any drug I must confess, I am not prepared to do. I know Gentlemen, that I cannot advance any new idea of the science, in any particular, whatever, that I might deign to hope, would be acceptable to you; and that the repetition of other men's ideas,

[illegible] stung many moons and years, and [illegible] the disfigurements [illegible] with all the torture [illegible] nothing but the horrible agony of death could inflict. It has caused the tender heart to think with emotions of the most profound [illegible]. And shall it be [illegible] many [illegible] more suffering than any other disease? It finds a place in the Allopathic nomenclature.

The phenomena of opium which the diagnosis of dysfunction developed, and many wonderful [illegible] the [illegible] [illegible] in one case would be no [illegible] for [illegible] [illegible] purposes [illegible] under dyspepsia. [illegible]

the disease is said to be seated, seems to sympathise with the whole system; and when the stomach is impaired and deranged, it perhaps the morbid influence throughout the whole system.

To establish the diagnosis of dyspepsia, we should not merely consider the symptoms which present themselves; but inquire into the history of the case: the habits of the patient, in particular the manner the food received, and made their appearance.

The question, as regards the seat of the disease, has long since been settled, and to this, to demonstration of the fact, we could be polly pod me to attempt. The facts which have been issued in the Pathologist, in regard to this, render the obvious, that the stomach is the seat of the disease.

This organ, situated in the cavity of the abdomen and occupying a portion of the left hypochondrium and reaching as low as a portion of the iliac region and of the most important function of the human economy.

When we search for the mechanism of man, and behold such organs of the [illegible] as by some innate power are struck with wonder and astonishment;

When we behold the living man, a moving mass of constituent matter; each constituent part [illegible] perfectly in its place, we must say, that God, that Deity is surrounded with perfections and attributes; and yet, amongst thousands, [illegible]

[illegible] we see this many
matters [illegible] in the [illegible]
[illegible] and of [illegible]-
ing our mistaken, and in another
wholly deprived of it — and mark
see, at once that there are
certain fixed and unchangeable
laws that govern it and that
these laws cannot be infringed
upon without a serious risk to
place in some part of the
[illegible]. We must [illegible] see
[illegible]
[illegible]
[illegible]
[illegible] be performed for nature
with the [illegible] [illegible]
[illegible] we see [illegible]
with more [illegible] [illegible]
[illegible] [illegible] more [illegible]
[illegible] could perform. [illegible] it
must [illegible] on [illegible] account
of [illegible] [illegible]

[illegible]

the acid condition of the blood,
is not far [illegible] to seek. But
[illegible] that [illegible]
[illegible] living characters
are more apt to attack per-
sons in a state of anaemia
than when the system is well
supplied with rich blood.
Being satisfied then, that the
stomach is the seat of the
disease, and [illegible] of the
[illegible]
it will teach us that our
first step should be (in the [illegible]
[illegible]
the stomach to a healthy condi-
tion and then [illegible]
[illegible].
[illegible]
I have been taught that the
first step should be to remove
the existing lesion and then the
system returns to its standard.

health. This can only be effected, in many cases, by attention to regimen — to take proper exercise in the open air — and to keep the skin clean by bathing.

The symptoms of epilepsy, among which are the following stated, are always the same in each individual.

Cold extremities, after eating. If sometimes are the first symptoms. Dizziness occurs, and the patient staggers between the table and the bed — he feels mentally ill at ease, confused, as though he is not himself — morbid — fastidious — effeminate mind, tended to accompany many cases of dyspepsia. Sometimes there is vomiting only. The patient can get nothing to stay on his stomach; after some meal, vomiting occurs and pains

[illegible] had been [illegible].
[illegible] a young [illegible] in
[illegible] age, presenting [illegible]
symptoms. He was a young
man, not tall, bazy or indolent.
but was [illegible] very healthy, and
also drank a fair glass, he say —;
but smoked and chewed tobacco
[illegible] and [illegible] [illegible]
and long at night. He
seem to vomit if he eat gross
victuals. In consequence of which
he great [illegible] have [illegible] not
[illegible], and [illegible] [illegible]
to give up his [illegible]. If [illegible]
him to [illegible] backsprend of [illegible]
digested — [illegible] [illegible]
[illegible] [illegible] [illegible]
— to vomit about [illegible] much, [illegible] the
[illegible] [illegible], [illegible] [illegible] and to give
up the use of tobacco in any form
[illegible] caused him, also, to [illegible] his whole
body [illegible] [illegible] [illegible] [illegible]

to take [illegible] of bodily pain
[illegible] like [illegible]
[illegible] the [illegible]
[illegible] [illegible]

Another case — a young man —
farmer — [illegible] to the
[illegible] shall [illegible] had enjoyed
good health — and had been [illegible]
in drinking, bad ate — morn-
ing meals. — He was very com-
plicated, but in fifty weeks he
became very much restored. He
lost his appetite — could not
sleep well at night — drank a
good deal — did not complain of
any pain, only a slight uneasiness
in the stomach: he was able
to work — to be about as much
[illegible] in [illegible], in [illegible] about
[illegible] — [illegible]
his pain [illegible] to [illegible]
[illegible] both and rest — he died
and returned much improved, and

I have always been entirely well. I have never made an attack upon myself. At the time of the attack, I fired at a very late hour in lifting a basket of cheese. The first noticed symptom of the disease. Had I not had a good constitution and strong health and strength in less a month afterward I began to have my strength and to grow weak and debilitated. I had terrible dreams at night – pain over my eyes, in the morning – before perspiration after exercise – sometimes my skin would be cold, during perspiration, and yet in a very few minutes hot and dry – I had at times, acute pains in my kidneys and felt debilitated in the back.

Pain in the stomach by intervals disappeared. Have felt good since the commencement of the disease

I applied to a physician, I was very much discouraged at the prospect and felt unable to take good courage and stand up in justification of the breach to take some bounty. I did so, and gave me a little back pay. I was fortune, month under his hands and took cream of his drugs.

After night, finding that I was getting worse, and worse, I resolved to quit my business, which was slacking, and to take in some work for the ships, I did so. I then removed to Rotherhithe (almost). I recovered from coming away — drinking tea and coffee — I was shaved and inoculated — and struck out a trade of this kind. I walked from five to four miles every day. and bathed myself every morning in cold water. [illegible]

Since I began this mode of living I commenced to improve, and in two years I enjoyed good health. I now feel confident that attention to [illegible] [illegible] of the [illegible] and exercise in pure air, are the most effectual remedies for dyspepsia.

These fruits [illegible] seem to be the richest original ideas that I can present, which I hope you will receive as their article, upon [illegible] [illegible] [illegible] [illegible] [illegible] its [illegible] and [illegible] not the future by the present, but by the past.

By receiving this [illegible] [illegible] forgotten [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] W. H. Hill

[illegible] by [illegible] the
[illegible] and [illegible]
and indulged in the [illegible]
— [illegible] been within our assistance
[illegible] required in the
[illegible] the years [illegible] the
[illegible]
[illegible] permanently and [illegible]
[illegible] unblemished,)
Rejecting me, you blight all.
You were here with sorrow
and affliction you shall reject
the [illegible] in which I hold
[illegible] — You separate me from
Friend whose confidence and [illegible]
are reposed upon me, and [illegible]
[illegible] responsible for the [illegible]
[illegible] You crush with
[illegible], [illegible] those hopes which I
[illegible] and [illegible]
[illegible] to this [illegible] — [illegible]
[illegible]
[illegible]
[illegible]

An
Inaugural Dissertation
On
Lobar Pneumonia

Submitted to the Examination
of the
Provost Regent
and
Faculty of Physic of the
University of Maryland.
For the Degree of Doctor of Medicine
By

C. Arthur M. Snowden
Virginia

February 1855

Baltimore Feb. 12th 1855

Gentlemen,

You are perfectly aware of the disadvantage a mere student labours under, in attempting to write an original treatise on an important and complicated disease, therefore I will make no excuse but dip at once into the subject I have undertaken.

Among the diseases of the chest Pneumonia is one of the most important and common.

Since percussion & auscultation have been brought to almost perfection, this disease uncompli=
=cated with any other is very easily diagnosed. Unfortunately however it is associated very frequently with others, such as Pleurisy, Bronchitis, Phthisis, & in fact may follow on

or coexist with almost any other disease.
What I design to speak of, is Pneumonia as it is generally met with — being itself an original disease.
Pneumonia is an inflamation which attacks the parenchyma of the lungs.
It is devided generaly into two varieties lobar, & lobular Pneumonia
The first consists, or we mean by lobar Pneumonia, that form of the disease which attacks a whole lobe, and by lobular when small portions or lobules are affected having healthy lung intervening.
The most common of these two varieties is lobar pneumonia.
If lobar pneumonia runs its full course it has three stages — congestion, inflamation or hepatization, and suppuration.

The first stage congestion shows the lung to be when examined in a red congested state, with its weight increased, and if cut or torn a red fluid exudes from it. If the disease is checked in this stage, the lung soon recovers its healthy tone; if not it runs to the second.
This has been called hepatization from its resemblance to the liver when cut. The lung, or portion of the lung which is affected becomes now much softened, and very heavy so much so that it sinks in water. If the disease now continue it passes to the third stage or suppuration.
The lung now instead of being red is gray or yellowish, and becomes or rather is exceedingly soft which by being pressed becomes almost

semi fluid. Abscesses sometimes form in this stage but they are rare —

These different stages are not generally distinct, but run into each other more or less

Altho' both lungs are sometimes attacked making double pneumonia, it is rare — The right side of the lungs is the most frequently attacked

Lobular Pneumonia — is much less frequent in adults than lobar, but children are often attacked with it. It has the same stages that lobar pneumonia has, and differs from it by attacking separate lobules instead of one or more lobes.

There is scarcely any febrile disease which is commenced with a

more frank and open chill than pneumonia: this is always followed by fever with difficult breathing quick pulse, cough & pain in the chest. This is not always the case; sometimes the patient may complain several days of dullness weariness rigours &c. before pneumonia is established—
But when pneumonia has become fully developed, we have a frank fever with quick pulse, hot dry skin hurried breathing more or less pain & cough. The pain is however very variable and differs much from that caused by pleurisy; not being so acute, but more dull & heavy—
Percussion & auscultation are exceedingly valuable in all cases

of pneumonia, but especially so where some of the ordinary symptoms are absent.

Percussion does not give as much information in the early stage of pneumonia as there is very little dulness upon sounding the chest, so small in fact that by itself it would not attract attention.

Auscultation however is of very great consequence, as it gives what is considered as almost diagnostic sign of pneumonia, when that disease is present and in its first stage — that is the crepitant rale. This rale shows that ~~that~~ there is a change going on or exists in the parenchyma of the lung, and is caused by the air cells being surrounded

by serum poured out from the inflamed tissues which upon the admission of air in the cells gives the cracking sound termed "crepitant rale". Of course the seat of disease being deep in the lungs, more superficial, gives the sound to a greater or less extent.
In the second stage the crepitant rale ceases and gives place to bronchial respiration; as the first is characteristic of the congestive stage, so is the later of the stage of hepatization.
Percussion now assists vastly, and gives decided dullness on percussion. This taken with bronchial respiration & in one of them gives pretty sure evidence of the progress of the disease. The two stages are seldom or never abruptly

devided.— That is some traces can generally be found of the congestive stage after the disease has passed to the second.

The signs do not differ much in the third stage of pneumonia from those of the second and we have pretty much the same sounds on percussion & auscultation that we have in the second.

The only way by which we can positively determine that the third stage has arrived, is when an abscess has formed and broken into a bronchial tube — then we have a gurgling sound and pus is expectorated if the patient have sufficient strength to make the effort.

The disease is by no means necessarily fatal in the third stage.

Even should abscess have formed the pus escaping through the bronchi the cavity left may cicatrize and the lung be restored to a healthy state I have endeavoured to give in as short a space as possible the history of ordinary pneumonia; its complications are very frequent & variable, also the age of the patient and state of the general system, modify and alter the various symptoms to a greater or less degree. The duration of pneumonia in the acute form is not of very long duration, ending soon generally either in health, death, or, going on to the chronic form.

The most frequent cause of this disease is cold & damp; with these other causes such as inhaling acrid vapours, or as frequently

happens the disease is caused by others, such as bronchitis, pleurisy & pleurisy, besides many others. There is one curious fact which I forgot to mention with regard to the symptoms of pneumonia, that is that when large portions of the lung are hepatized the breath is cooler than in health altho' the patient have decided fever, this is owing to the respiration or greater part of it being carried on in the bronchial tubes and the air not entering to a great extent the air cells.

The duration of pneumonia in the acute form varies from six or eight days, to two weeks, or thereabout.

The prognosis in simple lobar Pneumonia is almost invariably favorable in persons of good constitution and not too old. In persons above the age of forty five, or fifty the disease is often fatal. The disease when both lungs are affected is very dangerous, also in persons who are much debilitated by intemperance, exposure, or from other causes. Epidemics prevailing of a low form also modify it very much. It is also an unfavorable sign for it to be attended with diarrhœa and cold sweats. Pneumonia uncomplicated and not very deep seated can usually be diagnosed without much trouble by its peculiar symptoms & signs also its almost characteristic sputa-

Bronchitis in which the inflammation extends to the small ramifications of the tubes is apt to be mistaken for pneumonia of the deep seated form, and is frequently associated with it. Pleurisy also in some of its stages resembles to some extent pneumonia, as does also phthisis; but upon careful examination it can generally be distinguished from them.

Perhaps in no disease of so great importance as this can proper treatment avail more if seen early enough—; it requires prompt and vigorous treatment as a general thing—that is when it presents itself in a frank open manner in good constitution and has no typhoid tendency—

When seen in the congestive stage

one full bleeding will sometimes abort the disease, but generally not, as it frequently requires other treatment as we will see –

As the diseased lungs require rest, the best mode of producing this effect is by blood letting; by taking of a large quantity of the fluid we gain a double purpose, that of anti-dueing inflammation & resting as it were the lung –

When seen in the first stage, blood should be taken largely from the arm (if the individual be robust) to the amount of from twenty to thirty ounces, to be repeated afterwards if necessary in about eight or ten hours. Along with or directly after the first bleeding a cathartic should be given to clear out the bowels, calomel

combined with jalap will generally answer the purpose. The tartar emetic will generally keep the intestinal canal sufficiently open during the rest of the disease; if not this can be done with very small doses of any of the saline cathartics, or what would be better by enemata. Bleeding & tartar emetic are our chief remedies in the first stages. In fact they combine the very qualities we wish, both producing sedation of the vascular system and consequently a secondary soothing effect upon the nervous.

Along with the blood letting we commence the use of tartar emetic in the dose of from eighth to a quarter of a grain, every hours or two hours gradually increasing it up to a half or even a grain

as tolerance becomes established. As I said before we are sometimes enabled to cut the disease short in the stage of congestion, but when it runs on to the second, it is necessary to add to the treatment already spoken of some other remedies. Local bloodletting is much safer after the disease has been established sometime than general. If with our treatment by general & local bloodletting combined with tartar emetic the disease still continues to advance a mercurial impression produced on the system is generally highly advantageous. This is generally accomplished by administering a half grain of calomel with a quarter of a grain of opium

repeated very soon, until the the gums are touched showing that the constitutional effect has been induced. After the high vascular excitement has been brought down, to a considerable extent great benefit results from the use of vesicants applied over the thorax. These should be large. Persons of intemperate habits should be allowed in the latter stages alcoholic drinks to keep them up.

This I believe is the proper and best mode of treating pneumonia of the lobar kind; of course however the treatment has to be modified in various cases, for instance a patient will not or rather cannot bear the use of tartar emetic, when some other

of the preparations of potassa must be substituted.
Occasionally opium is not well borne by the stomach. Then morphia must take its place, or some other of the same class.
When calomel is not well received, the blue pill will very generally succeed, and so on, when one drug will not answer, another filling as nearly as possible the indication must be substituted.

An

Inaugural Dissertation

on

Pneumonia

Submitted to the examination of the Trustees, Regents and Faculty of Physic, of the University of Maryland. For the degree of Doctor of Medicine

by

Henry Vaughan

of

Benton Yazoo County

Mississippi.

Dysentery.

Besides the other epidemics, from the wide spread influence in the disorder of fluid and air, and it occurs in all climates and latitudes, has excited much attention, and offers no doubt of that the best results, in its medical division, will accrue to the treatment and pathology.

By one class of writers it has been regarded as inflammatory, from its arising to divided function of the skin, & this is concentrated in whom the bowels.

The symptoms of the disease, & the external conditions by which the observer is discovered in fact & overall the pain; also that bodily suffering is proved the most successful in many of the [illegible] of symptoms as yet [illegible].

Among the causes of [illegible] a cause [illegible] blood, and [illegible] [illegible]

chilling heat when the sun shines, followed suddenly by cold nights. It appears sometimes after a sudden heat, which has been preceded by cold. Sudden cold acting on the body after being violently heated, drinking great quantities of cold water when in a profuse perspiration often produces it. Heat and continued cold weather arrest the dysentery, yet it has sometimes been increased by long continued cold, this, however is an exception to a very general rule.

It appears on the shores of the sea near woody and uncultivated countries, where the dews are heavy, in armies from lying on the cold ground after hot and dry weather even though the camp should be dry and airy, wet clothes and the chill and damp air of the nights are its exciting and the miasmata from the surrounding country its primary cause.

The dysentery was not originated from the air of Wissating towns and from feeding pickled vegetable and animal substances into the bad issues.
The acid discharges from diseases of the liver, acids taken by the mouth, the amputation of a limb, ulcers and abscesses in the bowels, also produce a discharge from the bowels, and the dysentery.
To prevent at any time which produces fever and inflammation must be avoided. Those whose in health during the prevalence of dysentery should not overload the stomach, keep their bowels open, avoid much meat, and take that which is most digestible, as mutton, fish and fowls, avoid exposure to the night air after the evening meal, and if exposed the clothing should be warm, in the day it may be light and cool to prevent exhaustion from excessive heat, in the

ceiling covering sil should be always changed, the perspiration should be regular throughout the burning fever powers, sleeping on floors or stairs should be avoided, cold water must not be applied to the surface of the body, nor drunk when warm. The stools of the sick must be removed immediately, their rooms aired often, and a window kept continually open, no person should sleep in the same bed with those whose ill of this disease, and the linen of the sick should be often changed. The consequences of dysentery are, inflammation, suppuration, ulceration, and gangrene, particularly in the rectum and large intestines, pustular excrescences filled with foetid matter, which is discharged burning life. After death little solid apthlhae are found in the intestines resembling small pox with black spots on the top,

inflammation is found even in the stomach. Scirrous tubercles, abscessis in the cellular membrane contiguous to the rectum and colon, adhesions of the convolutions of the lower intestines to each other, the omentum wasted and black, with purulent water in the abdomen. In some cases all the viscera are adherent to each other, the gall bladder is filled with bile, and the spleen is more or less dissolved, the mesenteric glands are swollen, though seldom or never in a state of suppuration.

The signs of inflammation are always more violent in foreigners visiting tropical latitudes than in natives.

The typhus form alone is contagious and even in this case it is the fever that is contagious and not the dysentery. The inflammatory variety of the dysentery occurs often among persons who

live freely, though it is also the result of the usual causes of this malady.
The form of dysentery now under consideration, commences in general with much of the appearance of common diarrhoea, frequent and unseasonable calls to stool, with an irresistible inclination to stay over it
The evacuations are generally copious, of a fluid consistence without any peculiar foetor, sometimes streaked with blood, and at other times a small quantity of blood is voided in a separate form unmixed with the fecal matter.
The pulse in this stage of the disease is seldom altered, the heat of the skin is not perceptibly increased, and the tongue is frequently but little changed in its appearance.
There is always a great prostration of strength and depression of spirits, etc.

former symptom being always strongly asserted by the patient, the appetite is indifferent, and the thirst urgent. To these symptoms succeed a fixed pain in the hypogastrium, more or less acute, the pain sometimes extends to, and is peculiarly urgent in one or both the iliac regions, and sometimes can be traced along the whole course of the colon, with a sense of fulness, tension, and tenderness upon pressure, the evacuations now become more frequent, and less copious, they consist chiefly of blood and mucus, or are composed of a peculiar bloody serum, which has very aptly been compared to water in which beef has been washed or macerated. A suppression of urine and distressing tenesmus now become prominent symptoms, the indifference to solid food increases, while there is an uncontrollable

desire for liquids, particularly cold water, which the patient refers to any thing that may be placed to his mouth, yet which he cannot retain although aware of its being injurious.

The tongue is now generally white, and furred, sometimes however retaining a florid, smooth, and glossy appearance, with a tumulous motion when the tongue. the skin is either parching hot, or covered with a profuse perspiration, insomuch that it may often be observed standing in large drops on the surface, the pulse is still frequently but little affected. sometimes, however it assumes a febrile quickness without any other remarkable feature, at other times it will be found without any increase of velocity, but full, and rounding with a peculiar throbbing sensation under the fingers.

This state of the pulse, whenever it takes place, always denotes extreme danger, and shows that the disease is rapidly hurrying on to the final stage, in which the lassitude and dejection, so conspicuous throughout its course are now converted into the utmost degree of anxiety, depression, and fear of death.
The patient generally shows an inclination to dwell upon symptoms, which to a spectator would appear of minor importance. He evinces the greatest reluctance to part with his medical attendant, though fully sensible how unavailing the efforts of medicine are likely to prove.
The discharges by stool, which are frequently involuntary, are now accompanied with the most intolerable fœtor, they are frequently mixed with shreds of membrane, and quantities of purulent matter, a protrusion of the gut forming

a complete procidentia ani often takes place, and cases are on record where a portion of the inner coat of the intestine amounting to some inches has been thrown off in a state of mortification. When things come to this pass death soon closes the scene.

The periods occupied in passing through the different stages are very various, the disease often proving fatal within a week and at other times being protracted to two or three weeks, but seldom longer, where the inflammation is solely confined to the colon.

Sometimes it attacks with symptoms of a more general character, affecting the whole system, slight chills, general lassitude and uneasiness with some slight griping, restlessness at night, great pain in the bowels, so as to render it impossible to stand erect;

the stools become frequent, bloody and frothy mucous, less, with tenderness and great bearing down, thirst, headache, red face, tongue white, dry furred and yellow at the back part, pulse full and rather quick, with a hot dry skin.
Prognosis in inflammatory dysentery.
Some appetite, large and few stools in the beginning of the disease are favorable, vomiting in the beginning of this species in the slightest degree is bad, want of appetite, a disgust for food, hiccough when it proceeds from worms, wind, or indigestion, are in the beginning of no consequence, but if the disease has continued for a long time, it is an evidence of approaching gangrene, the more frequent and the smaller the stools are, and the more violent the tenesmus at first, the case is in proportion dangerous, large stools when the disease is of some

standing are a bad omen, also indigested food passing with the stools.

Treatment of the inflammatory variety.

The difficulty of determining the character of the disease previous to the use of remedies, will in part be removed by looking to the effects of climate, season, age and modes of life on its type.

If the preceding winter has been cold and bracing; if the disease appears early in the spring; if the patient be young accustomed to full diet, a cold climate, be of a plethoric habit, and yet retains his strength, it is probable that the disease is inflammatory, and will require the use of active depleting remedies.

The long duration of the chill indicates an inflammatory diathesis, also the consequent high fever, the pulse full, tense and strong, and the pains in the

and, however this, I am, [illegible]
[illegible] inflammatory symptoms, [illegible]
are acute, and more likely to occur in
[illegible] and giving in their addition; where
they do appear, the following treatment
is recommended by all men of [illegible]
who have written on the subject.
Bleeding generally and [illegible] day, if
[illegible], to be continued as long as there
is pain, with a full dose, mild and
[illegible] purge, and the strength
[illegible] unabated.
These with injections of warm mucilaginous
[illegible], given in a [illegible]
[illegible] time that [illegible] may not be [illegible]
[illegible], and the free use of mucilage
of gum arabic, gum tragacanth, barley
water, a mild emulsion, by the mouth,
will be found serviceable.
Fomentations of chamomile, [illegible]
[illegible] in water to the belly.

The warm bath, from which the patient is shaded by bleeding, is also useful, it produces copious perspiration, and gives immediate ease. It is particularly beneficial when the griping and tenesmus is severe.

Some recommend laudanum to the amount of particularly serviceable in allaying the tenesmus. Of the local applications dry cupping is highly praised, swathing the belly with a flannel roller, which operates by keeping up perspiration is also valuable. Emetics and purges, in this variety, at the time when the inflammation runs high are dangerous, because they increase it. Rest is as necessary for the bowels, when inflamed as for any other part of the body.

In this variety Diaphoretics are useful by giving an external direction to the circulating fluids, for this purpose,

small doses of emetic medicine, tartrate of antimony or ipecacuanha, to excite perspiration, should be given.

If, however during the prevalence of an inflammatory dysentery, it should appear in persons who have been debilitated from any previous cause, this depletory plan of treatment would be improper. When the blood shows no signs of inflammation and there is no great fever nor quickness of the pulse bleeding is useless, and may be hurtful.

As soon, however, as the inflammatory excitement is subdued, it is necessary to have recourse to purgatives to remove the irritating accumulations in the bowels, cream of tartar, the sulphates, either of magnesia, potash, or soda, or castor-oil, with the view of producing this effect in the most speedy and agreeable manner, should be given, colocynth, senna, aloes, gamboge and scammony should be

avoided, a large blister may be applied over the belly to prevent a return of inflammation.

Calomel is useful in the commencement as a purgative, and afterwards in small doses to stimulate the hepatic secretory functions. If the disease should not begin to yeild in six or seven days, the mercurial may be more freely administered, so as to affect the mouth. "In severe hepatic or bilious cases, and in those of a typhoid character, unconnected with a dyscrasic state of the blood it may be carried to salivation at an earlier period." The chief caution is to stop short of profuse salivation, and to avoid the use of the remedy altogether in those cases in which the blood is dark, and either feebly or not at all coagulable.

Symptoms of the remittent and intermittent varieties of dysentery.

This form of disease attacks like an ordinary remittent, or intermittent with nausea, bitter taste in the mouth, chills and headach, followed by vomiting of bile, fever, delirium, pain in the bowels, with frequent discharges of bloody masses, sometimes the patients are costive, with violent tenesma.

The fever is aggravated at a certain time every day or every other day, and in the intervals either relaxes or entirely intermits, the dysenteric symptoms undergoing, to a certain extent the same change.

Treatment of this form of dysentery.

Intermittent and remittent dysentery, sometimes so entirely follows the character of the fever of that name that its treatment must be directed by the rules laid down for the treatment of those diseases.

When it is intermittent, the dysentery only appears in the paroxysms, and as soon as the intermission takes place sulphate

of quinine must be administered, the dysentery is a mere attendant upon the fever in this case, and is sustained by it, and whatever may cure one will be sure to cure the other also.

Symptoms of typhous dysentery.

A disgust for food, a sudden loss and prostration of strength disorder about the pit of the stomach, bilious vomiting, restlessness, with fainting, stupor, and heaviness, glassy fixed eyes, sometimes a wild unmeaning ghastly physiognomy with excruciating head ache.

There is calm delirium at the beginning of the disease, and constant watchfulness; the delirium increases towards the close, also convulsions and fainting sometimes ensue, the voice becomes weak, the extremities cold, face pale, lips white, and green matter is vomited; the tongue is black, and the teeth covered with brown tenacious

slime, in some cases there are no pains in the bowels, in others they are violent and intolerable. The fæces are of various colours, mucous, watery, dark brown, yellow or green, or citron colour. For some times the fæces are greyish red, black, slimy, mixed with a substance that resembles chocolate and blood, of a very bad smell."

The pulse are low, and sinking, with increasing delirium. Strangury and heat in making water are still more common than in the bilious variety. The skin is dry, or cold and clammy, brown and bluish petechiæ appear on the body but not on the face, spots and pustules are seen over the neck, armpits and loins, filled with purulent matter. Death sometimes follows in twenty-four hours from the first attack.

Treatment of typhous dysentery.

The situation should be dry, and the chambers of the sick be well ventilated,

and most scrupulously cleanly; otherwise the disease becomes contagious.

Venesection in this form, even at first is improper. Other evacuants must be used sparingly and only at the beginning of the disease, and often even then, be entirely omitted. Emetics are sometimes noxious at first stages, however are generally useful, when carried to a moderate extent.

The state of the system will determine their propriety; thus if the patient be faint, the evacuations very copious and watery; and in the space of twelve hours great debility appear evacuants must be avoided, and tonics should be used. Soups which are improper in the remittent degenerating, are invaluable in this variety. White wine may also be given, the urine should not be too strong. a weak and fluttering pulse with delirium

a slow and weak pulse, with declining strength, render wine necessary, as in ordinary typhus; a trial however, is absolutely requisite, to determine exactly its expediency, and the propriety of continuing it.

"Oranges sliced, and sugar sprinkled, and then boiling water poured over them make a proper drink." Wine, however is the best beverage that can be taken. Camphor, as it is more lasting in its effects than wine, will also be found to be useful. Cinnamon, pepper, cloves and allspice, may be tried; they are often useful. Blisters applied to the legs are in obstinate cases, "The sulphate of quinine, given every two hours, will be found valuable, it may be given with snake root." The doses of this medicine should be small, and frequently repeated. Carbonate of Ammonia, and compound

tincture of lavender, are also good.
Of these remedies do not succeed much
may be tried, as is when given with cin-
namon and wine, an excellent stimulus.
The danger of the stools producing debil-
ity by their quantity, is great, in typho-
ous dysentery. It is therefore necessary
to give a dose of laudanum, or some
astringent after each evacuation.
Symptoms of Chronic Dysentery.
A sense of heaviness, without appetite,
indigestion, painful loose stools, frequ-
ent throughout the day, with a slow
weak pulse; great debility, dry rough
crust on the tongue; shreds of mucus and
and undigested food in the stools, with
a discharge of pus and bloody water, tine-
sness, and emaciation. In general as the
disease consists of inflammation, it will
be found that purgatives are necessary
to evacuate the faeces, and they must be

continued as long as hardened fæces are discharged. If the stomach should be sick, an emetic should be given, afterwards the use of the infusion of rhubarb, manna or tamarinds, and they should be continued till the bowels are perfectly free, and the tenesmus is entirely gone. Rhubarb operates as a tonic, and at the same time cures the griping and tenesmus. The regulation of the diet is among the most important points in the treatment of this disease.

When the pain is considerable, and the discharges frequent, opium in ipecacuanha should be given at bedtime, and with these calomel or the mercurial pill should be associated, when hepatic action is deficient, great powers over the complaint have been ascribed to the alterative action of the mercurial pill. Oil of turpentine, given in the dose

of ten drops every two hours is an excellent remedy.

When the disease is confined chiefly to the lower portion of the bowels, there is no remedy equal to injections of sulphate of ~~iron~~ zinc given in solution along with a little laudanum repeated twice a day.

Inaugural Dissertation
on
Erysipelas.
(Sub.)

Submitted to the Examination
of the
Board of Surgeons,
&
Faculty of Physic,
in the
University of Maryland:

for the degree of Doctor of Medicine.

by

James S. Jones
Dorchester County
Maryland.

Erysipelas

It is a disease, — now known to the Ancient [illegible] we get its name.

It is classed among the Exanthemata, by Na[illegible] [illegible] in the [illegible] [illegible] it [illegible] [illegible]

has a manifest disposition, to extend the disease [illegible] or sub-cutaneous cellular tissue.

The lymph, that is secreted, is not capable [illegible] coagulation; and, unlike simple abscess, the pus [illegible] spread widely through the surrounding tissues, thus extending the disease.

The different varieties of Erysipelas, may be said epidemically together; & under favorable circumstances, may be propagated by contagion and infection.

[illegible] inflammation, is liable to attack different parts; sometimes simultaneously, and often [illegible] metastasis; thus, affording evidence, of its Origin, — in a vitiated state of the blood.

[illegible]gh this, is strongly denied, by some Pathologists, who say, that this condition is accounted for,

Page, First.

[illegible]

[illegible] double [illegible]

[illegible]

[illegible]

[illegible] [illegible] solution.

Some writers, [illegible] [illegible] [illegible] several [illegible]; but most modern authors, [illegible] [illegible]

[illegible]

[illegible] certain other [illegible] symptoms with [illegible], such as [illegible] [illegible] [illegible] sensations [illegible] [illegible].

[illegible]

symptoms. It might rather be styled the [illegible] ers.

The local symptoms are, redness [illegible] swelling of the parts; next and pain of a burning point, and often intense. the redness disappears on pressure, but returns on removal of the hand or finger.

Effusion [illegible] does not occur [illegible] [illegible] the swelling [illegible] sometimes, when the inflammation is [illegible]

[illegible]

the second [illegible] the [illegible] is [illegible] considerable, and rapid; [illegible] more or [illegible] will occur.

[illegible]

as the disease [illegible] [illegible]

[illegible]

continuously; and again, in the form of [illegible] [illegible]

In the [illegible] either [illegible] [illegible] [illegible] generally affording relief to the symptoms.

Stage [illegible]

[illegible]

[illegible] sympathies in the [illegible] [illegible] mother.

Frequently, they seem to undergo a [illegible] similar affection, without the presence of protrusion.

[illegible]

with some [illegible] objects.

The receiver [illegible] a [illegible] notification [illegible] and the [illegible] attention, and [illegible]

[illegible]

However, in this [illegible], is not [illegible] uniform or general; it may be [illegible], and [illegible] the [illegible] first attack, being [illegible] while [illegible] are [illegible] [illegible]

It is not [illegible] to find that, after [illegible]

[illegible] in [illegible] constitutions that, an [illegible] [illegible] of a [illegible] [illegible] [illegible]

[illegible]
heightened [illegible] (vitality): and at times, [illegible]
[illegible] of the [illegible], originally [illegible].

The [illegible] [illegible]

had having been but lately [illegible]
[illegible] through [illegible] suppuration,
is likely to be easily, and [illegible]
[illegible].

[illegible]
integument is apt to take [illegible]
becomes [illegible] pres-
pression.

[illegible]
with [illegible] to heal well.

[illegible]
[illegible] but a [illegible] hue, is generally
[illegible].

The epidermis, [illegible] easily peeled off and
marks of inflammation [illegible]
[illegible] and subcutaneous [illegible] tissue.

It may often be recovered, in [illegible]
[illegible], or diffused widely through the [illegible]
and [illegible] tissue.

[illegible]

[illegible]

The diagnosis was [illegible] to be a case of [illegible] [illegible] before the [illegible] [illegible] of the [illegible] [illegible].

Whenever a patient, has [illegible], has [illegible] [illegible] [illegible], [illegible] [illegible] [illegible] with pain; swelling of the gland [illegible] neck, with tenderness; we have [illegible] [illegible] [illegible] the [illegible], [illegible] [illegible] [illegible] [illegible] [illegible], [illegible] this diagnosis [illegible] [illegible].

[illegible]

[illegible] by the greater swelling [illegible] [illegible]; the neck marked [illegible] [illegible], [illegible]

Erysipelas.

[illegible]

-stitutional tendency to the disease; for instance, in some individuals, its attacks are [illegible] frequently made; [illegible] in a [illegible] form, scarcely [illegible] abounding the asthenic type; in fact, it seems to [illegible] a beneficial result or effect.

There is also, said to be some inherent [illegible]

-duction of Erysipelas.

[illegible] and not unfrequently, without skin; and irritation of the skin, stimulating [illegible] of food, burns, scalds, leech-bites, blisters, rubefacients, [illegible]

-foreign of habitual discharges, as of the menses, or from old ulcers; the disease is very apt to be lighted up, in the system.

The Prognosis of Erysipelas, varies according to the symptoms of the case.

[illegible] a [illegible] and [illegible] [illegible]

[illegible]

Treatment.— In very mild cases [illegible]

[illegible]

[illegible] great and constant [illegible] is required; [illegible]

[illegible]

secretions, which are generally found after the

usual time, and skin, constipation of the bowels.

Local applications, consist in brown fomentations; when there is great pain, with tendency to heat, considerable relief may be obtained by washing the inflamed surface, with a weak solution of Opium, or Acetate of Lead, in a weak solution.

When, the surface of the inflamed part, seems to be irritated by the stimulus, of

dusted over the part, will cause a pleasant sensation of apparent relief, to the patient.

But, it is frequently better, to dispense with all covering, considering it of much more importance, to keep a constant surveillance, of the

[illegible]

[illegible] for the end of practice, is substituted by the profession; I am unable to say.

The [illegible] of [illegible], [illegible] to [illegible]

[illegible]

[illegible]

[

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] resulting [illegible]

[illegible]

[illegible] of [illegible] limbs, [illegible] the limb, then it may become necessary to amputate the limb, to save the patient's life [illegible]

occurs.

[illegible] and withered limbs, are still more common

[illegible]

[illegible]

[illegible] and [illegible]

[illegible]

[illegible]

[illegible]

An

Inaugural Dissertation

on

Dysentery;

Submitted for Examination

to the

Provost, Regents & Faculty of Physic

of the

University of Maryland,

For the

Degree of Doctor of Medicine,

by

James Madison Slaughter

of

Maryland.

Dysentery.

This disease is often ushered in by a sense of lassitude, want of appetite, nausea, bad taste in the mouth, depressed pulse, slight chills alternating with flushes of heat, thirst, dry skin; transient pains in the bowels, costiveness and occasionally diarrhoea. Sometimes the disease comes on suddenly with griping, mucous and bloody stools and tenesmus without any premonitory symptoms and this is most apt to be the case when it arises from causes that act immediately on the mucous membrane of the intestines. In general the fever is developed before the proper dysenteric symptoms show themselves, sometimes more or less diarrhoea with tormina precede the occurrence of febrile irritation and occasionally mucous and bloody stools with tenesmus are the first symptoms. From the commencement of the disease throughout its whole course little or no fæces are discharged spontaneously, the stools consisting entirely of intestinal mucous mixed

with more or less blood. Tenesmus is one of the most constant and characteristic attendants on this affection and the violence of this painful symptom affords us a pretty accurate measure of the violence and degree of danger of the disease. There is often considerable pain and difficulty experienced in voiding urine. The tormina are extremely violent and distressing particularly just before the urgent calls to stool are experienced and a constant soreness is felt in the abdomen.
Sometimes the stools consist almost entirely of intestinal mucous very little or no blood being mixed with it. In most instances however a considerable portion of blood is discharged with the mucous and in some cases the evacuations consist almost wholly of blood. These dysenteric discharges usually have a very peculiar disagreeable smell but no fetor in the beginning of the disease but in the advanced period of violent and dangerous cases they frequently possess a pungent and cadaverous smell and

often acquire a corroding and serious character. Sometimes a colliquative diarrhea occurs a few days previous to the fatal termination of the disease. In some instances the heart and arteries sympathize but very little with the local mucous inflammation the febrile phenomena being scarcely perceptible but much more commonly the attending fever is of a high grade. In protracted and unsubdued cases great prostration ensues the pulse becomes small, corded, and very frequent the countenance contracted and cadaverous the abdomen tender and elastic, and sometimes flat the skin harsh and shrunk the breath offensive and the gums tender and swollen. An apparent amendement occasionally occurs after these dangerous symptoms have come on but this truce in the progress of the symptoms lasts but a short time for although the pulse rises and becomes better and the tenesmus and tormina remit the restlessness

and anxiety increase the stools becomes liquid, dark, pungent, and offensive the countenance hippocratic the extremities cold and the surface of the body moist and clammy. At first the tongue is covered with a white fur becoming brown, rough and dry along the middle in the progress of the disease with red and moist edges. In cases of a protracted or subacute character the edges and tip of the tongue become clean smooth and flaccid and in the chronic form of the disease the whole surface is often smooth clean and red or red and granulated like raw flesh. The urine is always scanty and high coloured and sometimes of a pungent odour. The hepatic, and cutaneous functions are always inactive in this affection the alvine discharges being invariable free from the bile, and the skin obstinately dry during the active period of the malady. Causes— Obstructed perspiration from cold, or vicissitudes of atmospheric temperature is a frequent cause of mucous in-

=flammation of the intestinal canal. A cold and moist autumn succeeding a warm and dry summer is peculiarly favourable to the production of dysentery. Febrile miasmata have frequently an unequivocal agency in the production of this disease. It is doubtful however whether the exhalations are of themselves capable of exciting this affection but their influence in modifying its general character is frequently very evident in hot and marshy countries where the disease generally exhibits a mixed character partaking both of the nature of bilious remitting fever and pure dysentery. Although cold and dampness suddenly succeed warm weather may be regarded as a very common exciting cause of this disease yet as great and sudden atmospheric changes frequently occur without the production of dysentery, the disease appearing extensively during some years whilst in others it does not occur although equally variable and inclement, it would seem probable that cold or sudden variations of

atmospheric temperature and humidity, must operate in conjunction with other general causes of an occult character before the disease can become extensively prevalent. Among the sporadic causes of dysentery may be mentioned, the immoderate use of unripe fruit indigestible and unwholesome food, and irritating articles of all kinds received or generated in the bowels. Post mortem — The true pathological character of dysentery was not well understood until within the last twenty years. Richter was of the opinion that dysentery is a rheumatic or catarrhal affection of the intestinal tube. Becomer alleges that the cause of dysentery consists in a vitiated state of the fluids which stagnate in the alimentary canal. Inflammation of the mucous membrane he says is not primary in this affection, but secondary, the result of irritating action of these fluids on the internal membrane of the intestines. Later inquiries have shown however that an inflamed state of

the mucous membrane of the large intestines is invariable present to a greater or less extent in this disease. In some instances inflammation and its consequences are found no where but in the colon and rectum, but frequently more or less phlogosis occupies the whole extent of the intestinal tract from the duodenum to the rectum. But even where this is the case the signs of inflammation and its effects are always most conspicuous in the large intestines.
When dysentry terminates fatally in the early or inflammatory stage the mucous membrane of the colon and rectum presents numerous red patches somewhat elevated above the level of the surrounding skin and in some cases these elevated portions are covered with a number of minute vesicles more especially in the disease as it appears in infants. Dr Cheyne in his account of dissection made at the Whitworth Hospital Dublin says: the mucous membrane of the stomach and small intestines sometimes presented an in=

-flamed appearance which in general became more remarkable as the great intestines were approached. In the colon ulceration began to show itself in the part nearest the small intestines these ulcerations were superficial - but as the bowel was traced downwards they became deeper and more extensive. It was remarked that the last three or four inches of the rectum was sometimes almost entirely free from ulcerations. In those cases that died in the early stage of the disease from the mere violence of the fever or from some other affection the mucous membrane of the stomach and intestines was found more or less of a deep red or purple colour soft and pulpy, with an uneven surface not unfrequently rough and granulated. In some instances considerable structural derangement of the liver occurs in this affection. In sporadic cases however organic derangement of this viscus is very rarely noticed whilst in epidemic dysentery particularly as it occurs in hot and insalubrious climates this very frequently occurs.

Prognosis— When the discharges in the commencement consist almost entirely of blood the disease is usually much more tractable, than where they are composed chiefly of mucous or mucous streaked with blood. Copious discharges of blood in the beginning of the disease are beneficial perhaps by lessening the congestion in the portal vessels. Colliquative and fetid stools in the advanced periods of the disease are indicative of much danger. A tympanitic state of the bowels, more especially when attended with discharges of a muco-sanious fluid, is a highly unfavourable sign. The appearance of bile and the natural feces in the stools indicate a favourable change. When the tormina, tenesmus, and tenderness in the abdomen abate, at the same time that the skin becomes more uniformly moist we may regard the disease as tending towards convalescence and the more certainly, if the stool assumes more of a natural apperance.

Treatment— There are four morbid conditions

present in this disease which point out the gen=
=eral indications to be pursued in its remediate
management. Namely 1. inflammation of a
greater or less extent of the mucous membrane
of the intestinal canal; 2. general irritated
vascular excitement; 3. torpor of the cutaneous
exhalents; and 4. disordered function of the
liver. According to these pathological conditions
the principal indications are; 1. to moderate the
febrile reaction of the heart and arteries where
it is excessive; 2. to restore the regular action
of the liver and skin; and 3. to subdue the
local inflammation of the bowels. In esti=
mating the relative importance and ur=
=gency of these indications it is to be observed
that torpor of the cutaneous exhalents and
hepatic functions are general antecedent
to the intestinal inflammation as well as
to the febrile reaction. It would seem reas=
=onable therefore to conclude that the res=
=toration of these functions in the early or

commencing stage of the disease constitutes a primary object in the treatment of this affection and this is indeed confirmed by experience for in proportion as we succeed in the accomplishment of this purpose so do we equalize the circulation, lessen the determination of the blood to the bowels and subdue at once the general febrile excitement and the local intestinal affection. [illegible] internal excitement is incompatible with the regular performance of the [illegible] functions and tends especially to augment and sustain the local intestinal inflammation. The first step in the treatment of the disease is to moderate the febrile excitement when it is excessive by blood letting. In many instances however the alteration [illegible] is so rapid as not to call for blood letting but patients come in which the [illegible] is partially [illegible] and in which the alteration of blood is wholly inadmissible. If however the surface is

[illegible] quick or bad. and [illegible] [illegible]
[illegible] [illegible] The big [illegible] is [illegible] the [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
Most [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
In hot climates the liver [illegible] [illegible]
in its [illegible] and a [illegible] [illegible] [illegible] that
brought and [illegible] [illegible] [illegible] [illegible] [illegible]
the only [illegible] [illegible] [illegible] the liver and
preventing its rapid [illegible] [illegible] [illegible]
[illegible] the liver and [illegible] When the [illegible]
fever is of a high [illegible] [illegible] [illegible] [illegible] [illegible]
in the beginning of the [illegible] [illegible] [illegible]
[illegible] the [illegible] [illegible] [illegible] [illegible]
pain and [illegible] the [illegible] [illegible] [illegible]
[illegible] [illegible], calomel, opium, and blistering are
remedies upon which our principal [illegible]
must [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

[illegible] in the [illegible]. If [illegible]
[illegible] the disease has [illegible] to be
[illegible] and [illegible] [illegible] [illegible]
cannot fail to [illegible] the [illegible] of the
[illegible] and the [illegible] [illegible] [illegible] when [illegible]
[illegible] to [illegible] in the [illegible]. They should
therefore [illegible] to him be [illegible] by
[illegible] will [illegible] throughout the [illegible]
course of the disease. In fact in the [illegible]
[illegible] of [illegible] in this disease is simple
to [illegible] the contents of the [illegible] and
the best [illegible] that is produced in [illegible]
[illegible] the effect the [illegible] [illegible] [illegible]
[illegible] will be the result. Calomel is [illegible]
calomel or [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] in the [illegible] affection. It can [illegible]
be after the commencement of the disease [illegible]
calomel should be administered and followed
after the lapse of three or four hours by a [illegible]
[illegible] will be which a few doses of laudanum
may be advantageously added. The [illegible] [illegible] [illegible]

and laxative remedies is particularly beneficial
in cases attended with much pain and swelling in
the abdomen. The [illegible] of the [illegible] the
[illegible] of the bowels is then so great that
even the mildest cathartics frequently occasion
much griping and spasmodic contraction of the
intestines, in consequence of which little
more feculent discharges are procured by this
practice. Rhubarb was at one time much em-
ployed in this affection but its operation is always
slow and uncertain in this disease and generally
attended with very severe griping. In chronic
dysentery however rhubarb from the tonic pro-
which it possesses may be used occasionally with
considerable advantage; Emetics were formerly
much prescribed in this disease and they deserve
in fact much more attention in the management
of this affection than they at present receive.
Christison thinks the tartarized antimony deserves [illegible] preference
to any other article of this class. Many prac-
titioners prefer Ipecacuanha and tartar [illegible]

[illegible] as an emetic in this disease. It is at once mild and certain in its operation and generally causes a profuse increase of urine, [illegible]. Emetics are especially indicated when the tongue is coated with a [illegible] fur, [illegible] it with the red [illegible] much pain and bilious vomiting occur in the beginning of the disease. It [illegible] reason which the act of vomiting causes in the abdominal viscera excites the portal circulation which is always more or less in an engorged state in hepatitis, provoks the activity of the hepatic function, and finally strongly determines the circulation to the skin.

Diaphoretics, such is the intimate relation which subsists between the external and internal surfaces of the human body that the immediate excitement of the one is always attended with a diminution of action in the other; and hence in all diseases of the intestinal canal combined with high inflammation or inflammatory

the skin is dry and harsh and due to the retention of the retained excretory products which ought to be eliminated through the skin. Some difference of opinion has been expressed with regard to the comparative superiority of the dry and moist packs in resisting the attacks. In general a uniform moisture of the skin will be found more of the advantages which can be obtained from sweating directed to the skin. After the bowels have been thoroughly evacuated by mild purgatives and the general arterial excitement moderated by venesection, when this is indicated by the state of the pulse, diaphoretics in conjunction with rational treatment a highly valuable remedy. For this purpose the Turkish fumigation compression is perhaps the best which we possess. The employment of diaphoretics should be accompanied with the free use of liquid nourishing diluents. Combined with a direct irritant influence is a remedy of natural power.

in this disease. It may be conveniently and at no trouble given in milk, tea, or coffee. It is necessary to sit with the effect of the medicine, this may be done by. It is indeed scarcely necessary to exhibit the slightest medicinal action, being generally sufficient to stop its malignant progress in the temperate habitudes. Opium was by the ancients, by bitter or aromatic, paid most strictly excluded from the list of remedies admissible in dysentery. Hippocrates long before had a more correct opinion concerning the value of this medicine in the treatment of this affection. The impute of the day is given in the hands of a skillful physician that without it his hands are as it feet and his power of doing good in fainting greatly diminished. It should be observed however, that though a valuable remedy in this disease, it should not be freely given in the beginning of the complaint, nor during when the febrile reaction is of a vigorous grade.

But even in cases of this general phlebitis of acute recall loss of this medicine in conjunction with laxatives generally afford considerable benefit. After the disease has continued for two or three days the use of opium during relapses in the digestive combination mentioned above. Dislike of food to the abdomen will sometimes be considerable good in cases attended with much tenderness and pain in the abdomen. Emollient poultices are regarded at more serious in the opinion of the Professor. On the detection of neither particular after bathing most benefit may be obtained from the application of an emollient poultice to the abdomen. Stimulating embrocations may prove serious in the shape form of the oil of Nerium Oleander and camphorated spirits seems in current use. When there is much abdominal tenderness a portion of tartarum may be advantageously added to the mixture. Other bitters with articles of this kind which should be opposed

three or four times daily, a blood purgative should be taken every second day in order to [illegible] protracted and unmanageable with much general febrile irritation the spirits of turpentine occasionally proves decidedly [illegible] it should be suspended in some mucilaginous liquid should be given every three hours. Opening and emollient enemata are almost always highly useful means in the treatment both of acute and chronic dysentery. They are particularly beneficial in the dysentery affecting infants and children. Injection of flax seed, of slippery elm, or a liquid preparation of starch with a half dram of laudanum should be thrown into the rectum [illegible] three times daily. Injections of this kind even without the opiate rarely fail to relieve for a time the tenesmus and tormina and predispose the bowels to more free evacuations from the operation of purgatives. During the entire course of the disease demulcent drinks such as [illegible]

of non-irritating, flavored ice, inclusive of Nightshade;
or even the preparations of more or less bitter extracts
should be allowed. Every kind of solid food must
be probably avoided. Among the beverages mu-
=cilaginous drinks the infusion of sassafras-root
is the best. Along with its abundant mucil-
=age it possesses slight tonic powers a combi-
=nation of virtues which renders it particularly
useful in cases of a subacute character.
Mutton suet dissolved in warm milk is
much recommended by some writers. During
convalescence from this disease great caution should
be used to avoid every kind of indigestible and
irritating articles of food. The general tone of
the milder vegetable tonic astringents will con-
=tribute considerable to the speedy restoration
of health. Rice, barley, oatmeal, sweet and boiled
milk are among the most suitable articles of
diet after the subsidence of the disease.
I have in some degree given the established
symptoms and treatment of this disease, which

disease to which I add some observations which occurred immediately under view in the practice of my employer. In many instances where the foregoing treatment had tried, even when two or three had died in the same house with this disease prompt benefit was derived from Dover's powder blue pill and the application of spirits of turpentine over the abdomen. With mucilaginous drinks, plasters and fresh tree leaves sweetened with loaf sugar and mercurial pomatum constituted the principal treatment in these cases apparently last observable the closing scene. The bills of mortality and memoirs seem to have no advisable therapeutic agent noticed. When children, who constitutions are not broken down by other diseases. And the adult whose constitution has not been shattered are often saved the victim of this disease. A departure from the established treatment however trivial if it has a claim to utility should be persevered in. Hence

of improvement with these hasty observations. It also is my thus wishing you collectively and individually a long useful and happy life.

Samuel B. Wheaton
Athens Feb 10th 1851

An

Inaugural Dissertation

Intermittent Fever.

[illegible]

[illegible]

observation [illegible] make [illegible] subject of consideration.

[illegible] [illegible] [illegible]

[illegible]

[illegible]

[illegible] wet and [illegible] sending forth an unwholesome effluvia to which many [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] in the [illegible] [illegible] [illegible] of [illegible] [illegible] [illegible] [illegible] exempt from the disease, while otherwise [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] the disease [illegible] [illegible] [illegible] [illegible] the decomposition of vegetable [illegible] the [illegible]

This disease is [illegible] [illegible] [illegible] year, [illegible]

during the summer and autumn [illegible] [illegible] from exposure to the damp, foggy night and a warm Sun by day the system is [illegible] susceptible of [illegible] [illegible], when there is generally a raging Diarrhoea, and the Stomach and Liver [illegible] are involved [illegible] [illegible] [illegible] [illegible] [illegible]. Dyspepsia [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible].

[illegible] [illegible] [illegible] a well marked [illegible], that [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] the [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible].

[illegible] [illegible] [illegible] [illegible] climates than in humid in low places than in high. for it is a common saying in districts where [illegible] prevails that [illegible] [illegible] [illegible] [illegible] in the upper than in the lower [illegible].

[illegible] high by [illegible] which [illegible] it appears to [illegible].

Miasmata is said to be carried about by winds but intercepted by trees walls and rivers. It is more dangerous by night than by day.

The emanations which cause fever have been called by some authors marsh miasmata because they are common in marsh places and this has led to a great source of difficulty and controversy among the Medical profession. Some contend that they are [illegible] animal and vegetable matter, others again that the sole exciting cause is an effluvia proceeding from the surface of the earth which is distinguished under the Hippocratic belief. The nature of this we are unaware. It may be imperceptible to any of our senses but [illegible] shown to have noxious effects.

Agues would seldom occur in marshy places or they are very small

[illegible]

[illegible] of the Atmosphere or some subtile poison with which [illegible] [illegible] vegetable matter may be found on the Atlantic Coast where the sea weed acted on by Solar heat sends forth an intolerable stench. And [illegible] section are entirely free from Intermittent fever - or to use the Common Name Ague.

[illegible]

[illegible]

then coming from a purer atmosphere their system is more susceptible of contracting the disease from the exposure to [illegible] [illegible] with the [illegible].

[illegible] to contract Ague are those who have delicate [illegible] [illegible] in [illegible] [illegible] by day, and [illegible] [illegible] other causes [illegible] to mention.

There are several varieties of Intermittent Fever known, which can be [illegible] tertian and quartan the most common varieties. There are also [illegible] but these are very rare.

[illegible] other peculiarities [illegible] the nervous system [illegible] the beginning of [illegible]

[illegible]

[illegible] slight cough, headache [illegible] accompanied with vomiting of a bilious character. [illegible] [illegible] attempts to vomit, and what is ejected is [illegible]

[illegible] sensations [illegible] effaced [illegible] together. The main symptoms are from the constriction of the integuments of the wrists to complain of violent pain [illegible] and loins, with a severe headache; his tongue is [illegible]

of a whitish appearance [illegible] and corrugated [illegible] [illegible] and [illegible].

After the first stage namely the cold has lasted for a certain length of time it is followed by one of an opposite nature which is the hot [illegible] [illegible] and the patient is troubled with alternate flushes of heat. The skin [illegible] its former smoothness which during the first stage was [illegible] [illegible] that of a plucked goose, but it does not bear the same appearance it did while in the healthy state. The face is more [illegible] and flushed the skin hot and dry. The [illegible] [illegible], accompanied with head ache and violent thirst. The [illegible] is [illegible] and high coloured, [illegible] [illegible] [illegible].

The hot stage [illegible] over and the third stage [illegible] namely the sweating. The skin which [illegible] in the [illegible] stage [illegible] [illegible] and [illegible] now becomes moist [illegible] [illegible] and [illegible] [illegible] [illegible] [illegible]

the face and forehead which contributes greatly to the relief of the patient. The urine is now plentiful but turbid. The thirst ceases, and the tongue becomes moist. The pulse now regains its natural force and frequency. The pains depart, and the patient is nearly as well as ever.

[illegible]

diseases of which all persons at any period of their lives seem to be susceptible of taking when subjected to the specific poison of the poison. Fever may attack a person at any time but they are most [illegible] in spring and autumn [illegible] period of the year. [illegible] spring, as [illegible] [illegible] the autumn, [illegible] constitutes the Autumnal [illegible] is the most [illegible] dangerous and [illegible]

[illegible] common types are [illegible] most common in spring, the [illegible] in summer [illegible] [illegible] in the [illegible] and [illegible]

After this disease has been [illegible] on the dead effusions, and sometimes [illegible] the nervous system has received a violent shock [illegible] inflammation in the mucous membrane of the stomach [illegible] for a long [illegible] organ is [illegible] and inflamed, which is known more commonly by the name of [illegible].

This disease [illegible] general debility and [illegible] the [illegible] system [illegible] to [illegible] fever.

This disease is not a dangerous one but it will [illegible] time breaking down the constitution and preparing the way for some other more formidable disease.

Intermittent may be confounded with Remittent and Bilious fever. But it differs from Remittent in the Apyrexia never being complete; or the cold and sweating stages decided. Bile is found the thermometer higher daily and the pulse small and rapid during the intermission.

In the progress of Intermittents we find various inflammatory diseases especially in the digestive organs for instance in the Mucous membrane of the Stomach and Intestines, hence the Mucous Membrane of the Stomach is affected there is headache and blood thrown up when the Intestines are affected there are Morbid evacuations.

The prognosis is generally favourable in our own Country, but it depends more on the general health of the patient. If subject to any chronic disease or old and infirm it may prove fatal. Not to persons of health and strength, persons

in the disease of very promising cases that in most instances it often assumes a highly malignant type. When [illegible] from a mild intermittent it is generally in the cold stage or [illegible] against some [illegible] internal congestion with [illegible] clearing the cold stage produces general prostration and stupefying, and it is this congestive form which so often proves fatal in this disease. The vital powers being so prostrated by the cold that reaction cannot take place.

This form of the disease is generally found in those who are gross and nervous, or where their constitutions have been impaired by intemperance or any other causes unfavorable to the nervous system.

The congestive form generally sets in with a prostrated and clammy perspiration, accompanied by violent head ache, and pain in the back and loins, and a sensation of weight and

the Circulation. There is generally delirium which soon attacking the brain, with a small and weak pulse.

The hot stage commences very slowly and the face instead of being flushed as in the other stage of fever is now pale. The features contracted and the extremities cold. The breathing is slow and difficult. The pulse frequent small and thready and ordinarily there is a sensation of real coldness.

Besides these two prime we have two other forms of intermittent fever. The Quotidian and the Tertian.

The Quotidian is characterized by the intermission of one day. While the rigors are strong and accompanied with vomiting. The most common types that assume this form are the Quotidian and Tertian.

The third variety

The Malignant, is most frequently found in hot climates and is most liable to attack those with broken down constitutions. [illegible] is that after the second third or fourth paroxysm. The cold stage is either short or [illegible] the chill [illegible] [illegible] some very decided symptoms appear as solid pain vomiting accompanied with obliquate haemorrhage and petechiae, death generally occurs after the third paroxysm.

Treatment

It is past [illegible] to attend to the treatment of the general [illegible] [illegible] [illegible].

The treatment may be divided into three distinct [illegible]

that proper during the Cold hot and sweating stages.

First in relation to the Cold stage our [illegible] should be directed to bring on reaction, and for this purpose [illegible] external surface. While an Opiate may be administered to [illegible] It has been found [illegible] quinine administered just before or soon after the [illegible]

The [illegible] may be prevented by [illegible] administering [illegible] patient [illegible] the [illegible] had ceased operating - immersing the feet in hot water - and as soon as placed in bed giving from thirty to sixty drops [illegible]

[illegible] transmitted [illegible]
[illegible] this treatment [illegible]
Chill prevented or shortened, but the whole paroxysm is often rendered milder.

[illegible]
Care for commended in some cases [illegible]
control the cold stage.

When the hot stage comes on let the clothing be light and the body sponged if agreeable. The object is to moderate [illegible] the febrile reaction and to hasten the convalescence of the sweating stage, the remedies employed for this purpose are: bleeding in cases of violent reaction, cool diluent drinks, and the usual antimonial remedies. [illegible] when the skin is very dry and hot it is agreable and [illegible] [illegible] respiration [illegible] not recommended in this stage. The excessive vomiting and [illegible] this stage is sometimes [illegible] [illegible]

by a small dose of Opium or an effervescing draught of some kind — often the best diaphoretic. The sweating which may be kept up by warm [illegible] between sheets. The patient may sponge the body, and put on an [illegible] night dress. [illegible] persons apt to slight colds [illegible] Diaphoretics and give mild Aperients. During the intermission the most [illegible] remedies should be used to prevent the recurrence of the paroxysm. It is in this stage that the radical cure of the disease is to be attempted.

Purgatives should always be given at the outset, to clear the stomach and intestines of hurtful accumulations which impede the beneficial effects of the quinine or any other thing given. [illegible] dose of any good quinine is two or three grains of Sulphate combined with a little or ten of Sulphuric

given at bed time. If it does not operate a dose of Castor Oil. or Magnesia may be given.

On the following day the specific or chief remedy to be used with. Of these Quinine may be considered the most effectual in curing the paroxysms. In very obstinate cases where the Chill is hard to be checked upon a single grain of the Quinine may be given at a time. But it is more apt to effect a cure where it is given in doses of three or four grains during some days until some half a single ounce has been taken.

Quinine may be given either in solution or pills. The solution is the best method on account of its being combined with salts. It acts as a gentle laxative, cleansing the stomach and preventing the way for the quinine. This drug has a tendency to cause constipation.

In some cases it happens

that from irritability of the stomach the opium cannot be retained. Perhaps in such cases it may be given in the form of Enema which is sometimes very effectual.

Another remedy which is often given is Arsenic. It is both cheap and tasteless and this may in many other diseases in the case of the disease where other means fail. But on account of its poisonous properties it is not very often given as a dose may prove fatal and if continued even in small doses leads to a painful and lingering death with wasting.

Valerian is another valuable which is given. Obtained from the roots in the spring of 1[illegible] it is said to effect something as the same [illegible] Valerian is frequently used in mild cases where it seems to [illegible] young children. In these on account of some bowel [illegible] [illegible] cannot be given.

Be the cause [illegible]

[illegible]

An
Inaugural Dissertation
On Necrosis
Submitted for examination to
The Provost Regents and Faculty of Medicine
of the
University of Maryland.
For the Degree of
Doctor of Medicine
by
Candidus Kennedy

Tuberculosis.

Gentlemen of the Faculty,

As a disease, the observation and treatment of which calls the medical man to bedsides of children, young and old age, chambers of male as well as of female, the abode of affluence, and huts of the poor, this is in many ways, more interesting and instructive than pneumonia. It does it during its life history, in the different circumstances, under which its existence is demonstrated.

Its causes, course and results are all within reach of matter for scientific investigation; while the comparative paucity of works upon it, even at the present day, lends additional consideration, to the product of its two histories. Made, to have its seat in any part of the system, to which it is peculiar; and always emanating from it and exciting indications for its relief; the necessity for a thorough knowledge of its nature is obvious.

In order to accomplish this, it must be com-pletely isolated, and not confounded with other maladies, which resemble it, in some of their modifications. But, here at the very threshold, we are met by dif-ficulties. The same causes operate to produce this, that give origin to other varieties of morbid action, while the results, although in the main sufficiently distinct, to form separate diseases, blend the one into the other so insensibly, as to render complete isolation a task not easily accomplished. Caries us [illegible] ulcera-tion of the soft parts, so necrosis is the analogue of gangrene. Although occurring at every age, it is most frequently met with in early life or middle age.

Its chief locality, is the firm and dense portion of the long bones, their spongy structure, being more prone to take on the ulcerative process from the same amount of injury. The flat & short bones are however, by no [illegible] causes, [illegible] it [illegible]

its origination, as well as causes in necessarily more internal bones and organs, sufficiently attest. Its termination, on the least exposure, while showing diminished vitality, points clearly to the quarter in which the investigation of its causes is to be directed.
The chemical changes, their nature and influences being, yet "sub lite", and not thoroughly understood, the most satisfactory conclusions are those arrived from causes appreciable, to the senses.
The ordinary division of disease into external and internal possesses the most convenient method for studying them in relation to their consecutive phenomena.
External causes originating more frequently than internal, differ also to some extent, in the symptoms to which they give rise. The Periosteum, serving as a reservoir to the nutrient vessels of bone, although not itself a vital formation, yet highly conducive to its nourishment, as it is a field, to which injurious agents are

naturally turn, in seeking an explanation of this diseased action. Nor is the inquirer disappointed in his expectations, finding as he will be, that the diseased bone to be increased or diminished, in proportion to the destruction or injury of this membrane.

Wounds, bruises, exposure to air, acrid substances, caustics or accumulation of matter dissecting away the periosteum and obstructing the passage of vessels, are the most potent and general of external causes but these do not act in all cases with the same degree of severity.

Their action may be modified as to its extent and intensity, by many of the circumstances which influence other diseases.

Previous treatment has not, it is an unimportant point in the production of necrosis. The application of another drugging to force itself constitutions, not an infrequent source of its destruction in the earlier periods of surgery.

This imperfect knowledge of the true nature of bone and its diseases made this last cause very common in the earlier practitioners, until Wedemeyer substituted for the plan of treatment by acids, drying and irritating applications, that of emollient and soothing dressings.

The idea formerly entertained, that pus coming in contact with bone, becomes acrimonious and corrosive, producing necrosis, has also given way, before the disclosures resulting from an more thorough investigation of the effect upon osseous matter.

That matter confined around a bone and concentrate the irritation, may by compression destroy the osseous tissue to it - these two conjunctively, not in number - may readily be conceived.

A large collection of pus in a bone, by its pressure upon adjacent parts tends to produce their removal by absorption, and this may constitute

another of its modes of inducing necrosis. Thus, with the theory that the same amount of inflammation that produces the disease, would extend its effects to the bone also, are the doctrines now most commonly received and substituted for the old dogma of "corrosive qualities."

It does not follow that its death is necessarily the constant sequence of any one of these causes operating upon bone.

Its investing membrane may be torn away or destroyed to a small extent; yet if the constitution is good, proper care taken and other circumstances favorable, no destruction of vitality will result. But should old age, impaired health, poverty or neglect act in conjunction with the least of these external causes, Necrosis is almost inevitable.

The study of what have been called internal causes might be pursued

in connection with the diseases which they seem to be the results.
Scarlatina, Diphtheria, Smallpox, Measles and Scarlet Fever, have all left their impress upon the system in this shape while in certain cases, since the recovery improperly administered and the subsequent exposure of patients to cold, has produced necrosis of the lower jaw.
The spongy portions of bone having more susceptibility than the dense are liable to death, from an equal or even greater amount of injury, consequently necrosis is seldom found extending itself to joints.
Although ulceration is more apt to result, than gangrene, from injury inflicted upon the head of bone, yet it does occur in some cases, and where it involves a joint, is much more dangerous in its nature.
The situation of bone and ligamentous

The fact that disease cannot exist in the anus exterior, without making an impression upon the surrounding tissues, leads naturally to the conclusion that the majority of symptoms will be developed in the orifices. Indeed with the exception of those signs developed by the introduction of the finger and probe, when the fistulous orifices will admit them, these form the only criteria by which the existence and extent of disease can be determined.

The phenomena presented are the signs of inflammation or its results. Redness, Pain, Heat & Swelling become apparent at some one of the periods of the disease, which are usually divided into three stages, in which the bone is merely affected, when separation begins to take place, and the completion of this process.

Inflammation here as in other maladies

which admits of modifying circumstances, assumes one of two forms acute or chronic.
In the first, the disease quickly lit up, pain of a more intense nature but of shorter duration immediately supervenes, while the rapidity of the swelling and other symptoms, ~~tend~~ following the same rule, clearly point out its grade.
In the chronic form on the contrary the attack is more insidious and mischief to a great extent may have been done, before it manifests itself. Carrying out the distinction between the two, the pain here is less but of longer duration, the swelling more gradual, and abscess longer in reaching the surface.
But while these are, the general manifestations of disease, each one of them bears its modificatiens, which distinguish accidents from other affections

which the same system is subject, and which have to be noted and weighed in order to form a correct diagnosis and subsequent plan of treatment.

Pain, one of the surest evidences that there is a deviation from health, serves also to discover by its different character, the seat of injury. In internal necrosis, while the pain is of most intense nature, bending or jarring the bone, will not aggravate it, as is the case, when the external layers are affected.

Profuse perspiration, high inflammatory action, and subsequent exhaustion, uniting with this, constitute a case in which there is no slight ground for reflection. Swelling, of a peculiar character, offers here most valuable aids in diagnosis. Surrounding the bone, which is felt to be within it, it affects the circumference of the limb to a considerable extent. In

some cases being complicated with oedema, where old age, long continued disease, or a broken constitution exist in connection with the local affection.

This too, like the other symptoms, may come on either rapidly or more gradually. Its limits are not, as elsewhere, well defined, but blend so insensibly with the healthy parts, that it is difficult often to ascribe any boundary to it whatever.

Unlike abscess it has no [illegible] pointing point, but is generally somewhat firm, the skin involved in it, becoming tense and of a livid hue. Even pus is [illegible] found [illegible], from these causes, it is sometimes difficult to detect, when deep-seated, the swelling begins, when its discharge, to subside in some degree.

The abscesses formed in necrosis are frequently long in making their way to the surface, especially where

tendon is involved, but do eventually open, either in a direct line, or by many tortuous passages extending to some distance from the diseased site. The fistulous orifices change their appearance, at times, in consequence of some deviation in the underlying bone, or a fresh ulcerated opening, changing to a new orifice with its attendant hard edges.

Complete closure is prevented, in consequence of the presence of splinters or flakes of dead bone, or continued discharge swarming over the diseased surfaces renders them incompetent to produce permanent adhesive granulations.

Formerly it was supposed that pus formed in Necrosis, was necessarily of a very bad quality. Later observation has proved, however, that while acrid sanious secretions are seen in some cases, yet they are only

due to accidental causes, which would cause a injury either in other diseases, and that time, the double pus is not, by any means incompatible with repaired bone. These constitute the local manifestations of internal disorder, but constitutional disturbance also, is always a concomitant.

Inflammation proceeds, usually in the attack, and continues until suppurative disorganization takes place, which ultimately ends in a return to health, or is produced by health, induced by the continued drain upon the system. Necrosis appears both the internal and external substance of bone, and more frequently appears, of the incipient, it ends of bone-generation, and marks a dead part in the same in every case. The portion which has lost vitality, becoming a source of irritation and

disease, nature makes an effort to remove it.

Many theories as to how this was effected, were entertained by the older surgeons, some of which have successively been rejected or modified, as extended observation has elicited new facts in regard to this process. The intermediate bone becoming swollen and soft, the margins of the surfaces, on either side of the line of separation, between the necrosed and living portions, become rough and inflamed. In a short time a fissure is produced which extends in every direction, within the piece of bone to be detached. The adhesions between the dead and living parts become loose and less strong from the increased softening of the tissues until at last complete separation is effected, a portion of the superstratum

lost, while the healthy part remains untouched, and not [illegible] as before.

After its separation, the question arises, shall it be allowed to remain until it sufficiently large for its spontaneous exhaustion or the surgeon be called to assist in its removal. If allowed to remain, after a few days it becomes a source of great annoyance to the soft parts. Separation is more readily accomplished as the process consists in a mere double or bilateral surface, the circumference of a large extent, or the internal substance of the bone.

Exfoliation by means of the finger or forceps, discloses a rough uneven surface, at its edges, and the whole necrosed substance deprived of its brilliancy.

If the dead part can be detached and brought out of the cavity, it will exhibit either a surface very much blackened or a preternaturally white

appearance. The first is a positive proof of necrosis, but as it requires some little experience and tact to decide, whether the bone is normal or not, the last is not so decisive. The sequestrum being detached, causing more or less of its and consequently exfoliation of its covering, in order to [illegible] Nature to be rejected from the place. That this reproduction is possible and of frequent occurrence, is now universally acknowledged.

Different authors have reported cases of regeneration of the humerus, femur, tibia, humerus and bones of the forearm. [illegible] on a decreased scale of bone, no restoration takes place, the granulations which spring up under the dead portion forming merely a continuation of the periosteum. The bone, and subsidiary

are more remarkably the result of reproduction than the development of bone, though there are instances in which even these have been restored.
Cases are on record in which the [illegible] are [illegible] to this process, while it is almost deficient in the old [illegible] and permanent connection. Still for a time the new osseous deposit is thick and some bulky, but eventually, in the case of necrosis of the medullary substance of bone this absorbs the form and nature of the old. What is the source of this new formation has been a question much disputed and gave rise to many different doctrines. That it is very near akin to the callus formed in the event of fracture is the theory which has most general credence.
Experiment had taught, that both the periosteum, and medullary portions of the bone itself, in different

cases play an important if not the chief part in this restoration. [illegible] to the [illegible] sternum, [illegible] the whole thoracic [illegible] recovered, and detached regeneration took place throughout to a whole extent, the sternal and acromial ends, articulating in the same way as the old, without at all interfering [illegible] the use of the limb. The [illegible] thorough exfoliation this may extend. This instance, and others of the same nature, teaches moreover, that while bone is restored to the full extent of the old, yet the original form is rarely preserved, angles existing in the old, which are destroyed in the new, or deflections occurring in the last formation, which were not visible in the first and the reverse. If the sequestrum retains its position and the new material is [illegible] over it, shortening never takes place

but if it should be so, for it extends and there is nothing to resist the action of the muscles, straining is generally the consequence. Often there are several sequestra in different situations, complicating the diagnosis, and necessitating the aid of the surgeon to a certain extent.

When the necrosis is internal this can only be ascertained by introducing the probe into the cavities of joints which may exist in the neighbourhood of bones. Prognosis is dependent, in this disease, much upon the constitution, whether there exists a taint of scrofula or syphilis, and other affections which implicate strongly the system, when the age and needs of life, and whether it affects joints or other important sites. If seen early, subjected to proper treatment, and taking place in a healthy one is the most favourable result.

involving other parts, and complicated, amputation is at times demanded, and where long continued, with profuse discharge, death results from hectic fever, terminating the sufferings of the patient.

The treatment of Necrosis in order to be successful, should always be prompt and energetic. Delay may either render the inflammation, or protracted suffering, approach the operation with more of philanthropy than ability. The chisel, mallet, tenaculum and saw, always at hand & plain, and when needed, may not be avoided, in some instances, by judicious care & watchfulness. In a few cases the sequestrum presenting itself at an orifice may be removed with the fingers, when the more fixed to overall an internal disease, the surgeon's skill is entrusted to mollient applications and constitutional.

Several separate sequestra, distinguish

[illegible] must all be carefully weighed and considered, as we [illegible] which would keep up the irritation and defeat the aim of other remedies. As for the incisions would be as injurious as [illegible] becomes a matter of some moment to determine the precise period at which an operation may be performed under the most favorable circumstances.

2nd. Surgeon [illegible] is in danger of [illegible] to disadvantage [illegible] one or other of two causes. If at too early a period in the progress of disease he attempts to remove the sensitive tissue to which it is primarily attached, as to require much violence to extract it or, [illegible] still remain, as [illegible] of irritation [illegible] generally and [illegible] may be called for. On the other hand procrastination allows the depressing cause to exert its influence up to a point at which remedies cease to be available. [illegible] effects [illegible] will at

can show that any acrid or caustic substance could have little or no effect upon bone already deprived of its vitality, but must necessarily exert an injurious influence upon the soft tissues around it, we cannot look to these as causes of removal or necrosed portions. The exploded theory of separation from external irritations, or the power of the granulations, led, forsooth, to the supposition that internal remedies, in such a conspicuous position, were. But these are now believed to act more by general tonic or alterative powers, which they may possess and are purely constitutional. Acceleration of the separation might be assisted by the stimulated action of the lymphatics, in some cases, but the means par excellence, when the action takes place are the forceps or finger of the surgeon. After incision through the soft parts, very often is sufficient to reveal the desired results and then the removal is readily accomplished. Cases however, frequently occur, in which it is necessary to penetrate the newly formed shell, in order to reach the sequestrum. The repulsiveness and

matter, I would venture to offer this. The choice between them depends upon the position and power of the diseased bone, the pain of the disease or the relative inconvenience of the splinted and detached portions. In some cases the trouble the wounded leg gives depends on the day, but a course of constitutional treatment suited to the peculiar nature of the case, adopted. Multitude, strength, ingenuity, & a thorough knowledge of the nature of the disease will in the hands of a surgeon supplying these qualifications a field for the exercise of great professional eminence. While the rectitude of those obtained by his skill is no slight remuneration to the philanthropist, for any honest toil and deep study, that he may have given in endeavoring to acquaint himself with its most intimate history & phenomena.

Respectfully,

Dandridge Kennedy

Baltimore, Aug. 24. 1855.

Malaria

It has been wisely remarked that in the midst of life, we are in death: that man partaking of the nature of all sublunary beings, has a corporeal existence as uncertain in duration, as the flower of the field, that "buds blooms & withers in an hour." Nor is the expression devoid of truth; since so very numerous and varied are the sources of disease, which can be traced to atmospheric impurities alone, (not to mention the innumerable other ways) that we are liable in all seasons, & I had almost said at any place, to inhale poisons the most deadly & deleterious. Poisons, which "steal the roses from the cheek of health, & plough deep furrows on the brow of youth." Poisons, which impede the vital function of the brain, & cause "the soul by the idle comments that it makes, to foretell the ending of mortality." Thus in our efforts to support life, & keep in operation the complicated machinery of the body, we are unconsciously bartering away our lives, & drinking in that, which unless it be checked in its course, will ultimately extinguish every spark of vitality. To day, disease will bordow the wings of the gentle breeze, & while refreshing the wearied body, sings, but the requiem of its destruction — Tomorrow, it assumes the livery of morn, & thus invisibly traverses our

beautiful vales and happy hamlets; stopping the farmer in his agricultural pursuits, the matron from her household duties; & blanching the cheeks of all with fear as to the results of its unmitigated fury.
Since then disease is so subtle & insidious an enemy, that it watches for & embraces every favourable opportunity to attack us, it is of great importance to become acquainted with the nature & history of the various changes occurring daily around us, which render the body more susceptible to morbid influences. It is within the province of medicine especially, that these investigations should be made with the greatest zeal & assiduity; since the success of its votaries will be in proportion to their knowledge of all such circumstances attending their patients. To enumerate the many causes of disease, both predisposing & exciting; would be a tedious undertaking & would fill volumes. Nor is it my intention to speak of the many ways air may be vitiated: such for example as are produced by the different gases, as carbon, carburetted hydrogen, or sulphuric acid, which are injurious to health & indeed incompatible with life, when met with in undue quantities. But I will even confine myself to still narrower limits, & pass over unmentioned those aeriform products, which are formed in consequence of the laws of chemical affinity &c: preferring to speak solely of "malaria or marsh miasm; the effects of which, are as familiar to most of us, as a thrice told tale, & con-

stitute in many sections of our country, the greatest damper to health & happiness. What then is malaria? Unfortunately, notwithstanding the frequency & periodicity of malarious fevers, little definite knowledge has as yet been collected regarding its entity. That it is an exhalation arising spontaneously & contaminating the air so as to render it more or less noxious to human life, is what we can positively assert. Yet as to its simple constituents & its modus operandi, we are wandering in the same labyrinth of uncertainty & speculation, as were our predecessors of past centuries. This poison is noted by its partiality for low, marshy spots, & is undoubtedly met with in greater abundance, & marked by more malignant effects, wherever we find a prolific vegetation, or whatever that tends to increase the amount of vegetable decomposition. In other words, malaria is evolved in an equal ratio, with the amount of vegetable or animal decomposition. The question then naturally arises, whether or no vegetable decomposition be requisite, or at most auxiliary to the evolution of this malaria, gaseous substance, or whatever it may be termed; since malaria is an optional name I have used, because all understand it to mean technically the morbific agent to which I refer. In seeking for an answer to the above question, we meet with a schism in the medical family. We find the opinion of physicians divided & indeed opposed to each other. Watson for example tells us,

that the prevailing idea, as to vegetation being necessary for the formation of this deleterious agent, is erroneous in no small degree. His reasoning is strong & at a first reading seemingly conclusive, yet when well considered & viewed in unison with attendant circumstances, we are unwilling to build up a dogma on such dubious data. He instances the case of sea-weed, which are deposited in immense quantities along the sea coast, which nevertheless give birth to no malarious fevers. In such a case, we could attribute the health that smiles on these places, to some neutralizing power existing in the surrounding air, or more probably in the salt water. We know upon the authority of well informed chemists, that in their endeavours to detect the poisonous principle of these effluvia, they have invariably met with disappointment, as the guerdon of their best directed exertions. Since then we are in ignorance as to the physical & chemical qualities of this something, eluding as it does the most delicate test of scientific ingenuity; is it fair to conclude that malaria is a stranger to those spots, because it has been shorn of its strength by some benign intervention. This same professor, after commenting in his pure classic style upon the false yet fashionable creed of the day, & the necessity of medical men disseminating correct views of this subject among the laity: goes on to cite a case to substantiate his position. He recalls to mind the occasion of the English army encamp

ing in Holland during the hot & dry summer of 1794. The tents were pitched on dry sandy table land, devoid of all vegetation, & where the monotony of vision was only varied by a few stunted plants. Here it was he says the pestilential breath of intermittent fevers, committed such havoc among the British forces. In Walcheren, a section of country of similar soil, to that previously alluded to, where no visible vegetation existed; we are told these exhalations on one occasion, filled the island with death and desolation. But what do these examples prove? Can they satisfy the mind, eager in the pursuit of truth absolute & undeniable? Certainly not. They go to show that malaria may infest places where there exists no luxuriant vegetation, or if you will, where no decom position can be detected. Then the question at issue is, whether this poison could have been wafted to these places by the winds, or carried there by persons themselves, having received the poison into their systems previous to their departure from home, which seems reasonable as the occurrence took place, when a number of troops from malarious districts visited them. Indeed instances of the kind are far from being few or unfrequent, where persons residing any time in malarious portions of our state, have been subject to intermittents for months & years after their removal from such parts.

Again, is it not gratuitous to assert that in the above mentioned places, malaria was generated independent of or in the absence of vegetable decomposition in toto? Cannot one with equal plausibility affirm that decomposition is going on & aids in the production of this miasm something in toto destitute of all apparently of all decomposible matter. Do we not know that no place is exempt from that conservative law, by which matter is constantly undergoing changes in the great laboratory of nature? Now it is decomposing, now it is reduced to its simple constituents by a variety of processes: anon it furnishes material for the production of other beings. Are we not aware that this is a physical law & no less subject to change or suspension than is that of gravitation, or that which causes the planets to revolve in their respective orbits with the sweetest harmony. Dr Watson makes mention of many other cases, taken from Dr Ferguson's history of marsh miasm, & refers us to the same work, for further confirmation of the opinion he advances. Let us however look at the other side of the picture, since one can thus be enabled to draw more correct conclusions & obtain a more satisfactory idea of the matter. That vegetable decomposition is a requisite for the development of this morbific substance, is inferred from the fact, that it

is always more abundant & virulent in places of much fertility. Where there is much moisture with luxuriant vegetation. Thus we trace it along the banks of the Potomac & James river: we find it partial to low meadow lands, which farmers inundate occasionally with the view of rendering them more prolific. Another circumstance that deserves notice is, that these effluvia are periodic in their visitations. It is in the latter part of summer & when the "seared & yellow leaf" of autumn, rustles beneath the foot of the inhabitant of malarious districts, that he awakes from his peaceful dream of safety & fancies the enemy at his threshold. He considers prudence the better part of wisdom, & puts on the armour of self mortification. Then purchasing a large amount of ammunition, such as solutions, colygogues & pills, he drinks in courage by the glass, & awaits the almost certain assault of his enemy.
He may possibly stand his ground & sustain no injury in the campaign, yet when the din of the battle has subsided, & he looks around, he finds those who were fighting next to him, those who were nearest & dearest to his heart, wrapped in the cold embrace of death: the victims of a victorious enemy.

The picture is not too highly drawn, it is a faithful copy of what actually occurs. The prevalence of malarious fevers in late summer & autumn may be as-
~~sociated~~ cribed to the circumstances that vegetation at this period receives a certain check. The earth has gilded its products, & as it were seeks a short quietus. All vegetable matter then has a tendency to decay, which is favoured by the heat & copious dews occuring at that season.
From observation then we are led to suppose heat as well as moisture essential to the evolution of malaria.
Dr Watson says it seldom originates below the temperature of 60° Fahren. thermometer; & that it ragges with greater violence at about 80° — It has likewise been ascertained that a continuation of heat is as necessary as a certain amount of it, to bring into play the morbific effects of miasm, by which means alone its existence is cognizable —
The above mentioned author again informs us, that beyond the 56 degree of latitude, malarious fevers are seldom if ever prevalent, because there the warm seasons are comparatively short, though they be as hot as the summer with us. That a certain amount of heat then is required for the generation of malaria is evident; & that as the temperature advances above this point, its elevation is followed by an increase of this poisonous agent, is

I think to a certain extent equally indisputable. I do not say that the greater the heat the more intense will necessarily be the influence of the poison, for regularity of the fermentation, that is to say a continuation of heat is more prompt & apt to generate such effluvia, than are sudden alternations of very high temperature — Then granting the amount of vegetable matter to be abundant & all things favourable, it is plain that in those parts, where we have a continuation of warm weather any length of time, there the process of decay & the generation of malaria likewise proceeds uninterruptedly; & that the air being constantly charged with this poison, we would expect it to be more noxious to health in such places than elsewhere. Our warmest weather is frequently in July, & yet these poisons are never in full blast until the latter part of August & September. That moisture is necessary for the production of miasm is I believe admitted by all. It assists in the putrefaction of matter, & if we sift well the knowledge collected on this subject, & pay any regard to the facts, as furnished us by observation, we must admit that this putrefaction, I have alluded above, is requisite for the production of malarious exhalations. Heavy rains exert a preventive influence over these effluvia. During very

wet seasons they are mild in their effects, or remain entirely latent. If our summers are sufficiently wet, to keep the low lands covered with water, they are less sickly than the highlands. So general is the belief, that water renders this poison harmless, that it would be no easy matter, to persuade a person residing in a malarious region, to draw off the water from a pond or lake in the vicinity of his dwelling, in the summer or fall months. It has been observed, that by their affinity for moisture, rather than by any peculiar specific gravity possessed by these miasma over the air, that their poisonous influence is more powerful near the ground. Hence it is, some consider the lower floor of a house more unhealthy than those above; & low land situations the hot beds of malarious disease. This however is not a universal opinion. Many suppose low lands less subject to malarious fevers than the surrounding hills. This to a certain extent is true, particularly if the highlands are to the windward, if such an expression be allowed. The winds in summer we know, blow most frequently from the South; they take up therefore these exhalations during their passage over marshes, & deposit them on the hills in a concentrated state. Here the air is rarified, & the atmosphere becomes by necessity, more highly charged with this morbific agent. Diseases resulting from miasm, are of an endemic nature; though occasionally they assume the garb of epidemics.

But the causes of these two different types of disease, are undoubtedly identical. We see the two fevers making their appearance about the same period of the year, having the same anatomical expressions, subject to the same complications, & finally cured by the same remedy. These facts I think are sufficient to carry conviction to the minds of those who consider the above question "adhuc sub judice". A singular fact is narrated in relation to this subject: namely, that the air of large cities is not rendered unhealthy by these exhalations. It is said that while persons living near Rome, are excessively troubled by malarious diseases, the inhabitants of the city enjoy perfect health. What constitutes this antimalarious principle in the air of large cities, has not been ascertained. There are some virtues, which when carried to an excess degenerate into vices, & I think to subscribe to the above unconditionally, would be placing altogether too much faith in the testimony of a few; since upon such a belief might hang the health & even lives of many. We know that the air in close populous cities is undoubtedly less pure than that of the country. There must also be noxious gases arising out of cellars, where there is much moisture: then too the vitiated exhalations produced by the filth that accumulates about the hovels of the poorer classes, the wharves & elsewhere,

do not go to prove such a proposition. But admitting the above to be a correct statement, what let me ask can be the cause of this city exemption? This condition of things engenders typhoid fever the continued fever of this country, of an asthenic nature, & implying great intensity of cause; upon what grounds then is it so positively affirmed that malaria is never present, or in other words, is neutralized by the air of large cities. From my limited acquaintance with the facts connected with this question, I am inclined to think that so far from warding off malarious diseases, the air of crowded cities, acting like all other causes of depression, not infrequently predisposes the body to the influence of miasmatic poison, as well as to other febrile disorders. I will moreover venture to say that many physicians here & in all cities, who, while attending intermittent or bilious fevers, have observed causes, which they considered the immediate origin of the poison, which occasioned their patients sickness, without looking to causes more remote. How often do we not see pools of stagnant water & heaps of accumulated filth in close proximity to houses, which and to the presence of which might justly be credited the ill health of their inmates.

As I before remarked nothing is positively known of

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